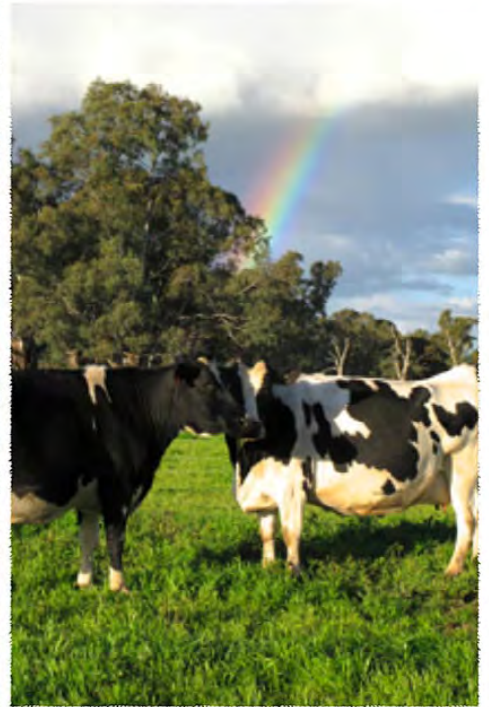


# FOXGROUND AND BERRY BYPASS



## A Community Response to the Environmental Assessment for the Berry Bypass

1 January 2013

Prepared by: Berry Alliance



BERRY ALLIANCE  
FOXGROUND AND BERRY  
BYPASS

**Submission to the Director General, Department of Planning and Infrastructure**

**Dated 1 January 2013**

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## **1. INTRODUCTION**

Of the many stakeholders in the Foxground and Berry Bypass project – NSW State and Local Government, RMS, numerous government authorities, NSW taxpayers, the travelling public and others – the Berry community occupies the unique position of being the principal bearers of the project environmental and social impacts. Our community will be left to live with negative impacts arising from the project that may far outweigh positive gains. The Berry Community is the major stakeholder and our position outlined in this response to the Environmental assessment report warrants due and careful consideration.

This report has been prepared by the Berry Alliance on behalf of the Berry community. The report aims to highlight areas of concern to the Berry community with respect to the Project.

The statements made in this report primarily respond to the findings presented in the Environmental Assessment (EA) and appendices issued by Transport NSW, Roads and Maritime Services, dated November 2012.

The report also discusses additional items of community concern that have not been addressed by the EA document.

The intent of this report is to assist Planning NSW to recognise and take account of the opinions of a major of stakeholder group to this project – the community of Berry township and its environs.

## **2. REFERENCED DOCUMENTS**

- NSW Government, Planning, "Director-General's Requirements for a Project Application for the Princes Highway Upgrade – Foxground and Berry Bypass", 11 February 2011.
- Transport NSW, Roads & Maritime Services, "Foxground and Berry Bypass, Princes Highway Upgrade. Environmental assessment and appendices", November 2012.
- NSW Government, Environment, Climate Change & Water, "NSW Road Noise Policy", 2011
- Transport for Quality of Life, "Traffic Noise in Rural Areas", 2008
- Parliament of Australia, Senate Standing Committee on Aircraft Noise, "Falling on Deaf Ears", 1995
- WHO, "Burden of disease from environmental noise", 2011
- WHO, "LARES, Final report, Noise effects and morbidity", 2004
- WHO, "Guidelines for community noise", 1999

### **3. ROLE OF THE BERRY ALLIANCE AND BOB**

The Berry Alliance is a community consultative body operating as an incorporated community group dedicated to assisting the interests of the residents of Berry. It draws its membership from residents of the Berry community who live within a ten kilometre radius of the Berry township. The Berry Alliance publishes a monthly newspaper the "Berry Town Crier" which is delivered to over 2300 Berry residences. The Berry Alliance also organises public forums for issues of concern to the Berry community if more than ten residents write to the Alliance requesting such a forum.

The Berry Alliance has conducted three of these public forums relating to the Foxground and Berry Bypass. At one of these forums in May 2009 a subcommittee of the Berry Alliance "Better Options for Berry" (BOB) was formed to work to mitigate the environmental and social impact of the RMS "preferred route" for the realignment of the Princes Highway around Berry as it then stood.

In the three and a half years since its formation BOB has continued to try to work constructively with the RMS to achieve better environmental and social outcomes for Berry. BOB has always conducted its activities in a very transparent manner and has reported its activities in the Berry Town Crier. In September 2010 BOB circulated a petition relating to shortcomings in the selected access options for Berry and other matters. Over 1100 people signed this petition forcing the RMS to revise the proposed exit onto Alexandra Street.

Another issue addressed by the petition was to establish a mandate for the Berry Alliance and BOB to represent the Berry Community on the highway upgrade. In meetings prior to this petition RMS had insisted that the Berry Alliance and BOB views were not representative of the Berry Community despite the fact that we had held two public forums on the highway upgrade prior to the petition being circulated. The petition, which was signed by over 1100 people and presented to the NSW Parliament by the Member for Kiama, at last forced RMS to have meaningful meetings with the Berry Alliance on a range of issues relating to the impact of the realignment of the Princes Highway on Berry and its surrounds.

BOB met with the NSW Minister for Roads with the Member for Kiama in July 2011 and this and other community representations resulted in the RMS reviewing the alignment of the new road to the north of Berry and formation of a Community Review Group. Four members of BOB participated in the Community Review Group.

BOB currently has 24 active members who attended meetings and participated in this response to Environmental Assessment and many more "friends" we keep informed by email updates.

#### **4. REVIEW OF THE DIRECTOR GENERAL'S REQUIREMENTS**

The Berry Alliance notes that both letters to RMS covering the Director-General's requirements outline a procedure of prior review of the Environmental Assessment Report by the Department of Planning, following which the RMS is then permitted to issue the document for public exhibition. We trust that prior review does not mean prior approval by DP&I and that any pre-exhibition review is solely for the purpose of checking completeness of the document scope.

The Berry Alliance also notes that the Director General has stated that the Project Application requirements may be changed at any time. We therefore trust that, should any issues raised in this report warrant more rigorous investigation by the Environmental Assessment Report, the Director General will be able to so request it.

Most of the requirements outlined by the Director-General are, clearly, responsible assessment requirements. A number of specific issues or instructions arise that we believe warrant specific consideration. These are:

##### **DGR GENERAL REQUIREMENTS ITEM 3:**

***“an assessment of the key issues, including an assessment of the worst case and representative impact for each issue.....”***

Our interpretation of this statement is that the RMS environmental assessment should endeavour to quantify both aspects – the expected worst case and expected typical case. We do not think it fair or reasonable to evaluate only the typical case and concede that, in some situations, the impact could be more major. The party that bears the greatest risk should the worst case ensue is the Berry community and only the Berry community can sincerely evaluate the magnitude of that risk.

##### **DGR KEY ISSUES – TRAFFIC AND TRANSPORT:**

***“Consideration should be given to what effect potential major land use changes in the locality may have on the traffic assessment outcomes;”***

Two critical issues flow from this requirement – validity (or clarification of the predictive uncertainty) of the traffic flow values on which the prediction of major potential impact issues, such as noise, are critically based; strategic operational planning issues affecting access to and from the township and significant town planning constraints that appear likely given that the Project creates a barrier between the existing town and the main area for proposed expansion documented by Shoalhaven Council. These aspects must be rigorously examined before a safe approval can be granted.

##### **DGR KEY ISSUES – NOISE AND VIBRATION:**

***“Where work hours outside of standard construction hours are proposed, clear justification.....must be provided including alternatives considered.....”***

We strongly support this statement. A clear justification must be a more robust argument than a simple assertion that works outside standard hours will save time or cost. Taken to extreme, this justification would logically allow total disregard of environmental or community impact considerations. There is nothing unusual about this project or its

location that appears to warrant special consideration with respect to hours of work. In fact, the contrary is the case, given the locality is a quiet rural township and environs.

The World Health Organisation provides valuable Guidelines for Community Noise<sup>1</sup>, that advise the following principles with respect to effective noise management:

- The precautionary principle
- The polluter pays principle
- The prevention principle

These principles do not support the approval of work outside normal working hours without strict and rigorous control conditions.

***An operational road traffic noise assessment including consideration of local meteorological conditions (as relevant) and any additional reflective noise impacts.....***

There are numerous microclimatic areas within the Berry region, where both temperature inversions and prevailing winds are almost constantly present. Both of these factors affect noise propagation in the surrounding valleys almost constantly. A sincere and robust evaluation taking account of “worst case” conditions would include consideration of properties up to at least 1 kilometre from the road and assessment should present a statement of the mitigation requirements necessary under adverse meteorological conditions. It is not sufficient to simply state that conditions will be worse under adverse conditions, as we believe the probability of occurrence for worst case conditions will be high.

Making predictive allowance for additional reflective effects is technically difficult, however the Director General may wish to note that these effects can be very distressing. The post operational review should impose clear responsibility to evaluate the actual effects of reflection, or alternatively to require that the risk be designed out of the project through the implementation of sound absorptive barrier facings.

***The assessment(s) must take into account the following guidelines as relevant:.....***

The schedule of noise guidelines is not the only set of guidelines that the Berry Alliance believes to be relevant. All guidelines present a necessary framework for evaluation using technologies and principles considered relevant to the date of each publication. However, work at an international level continues to develop assessment proposals for a number of key issues from the perspective of the Berry community – wakeup effects, loud noise at night, and loss of rural amenity – that are not necessarily evaluated clearly by the current NSW guidelines. A number of these documents are referenced later in this report.

## **DGR ENVIRONMENTAL RISK ANALYSIS:**

***“..EA must include an environmental risk analysis to identify.....potentially significant residual environmental impacts after the application of proposed mitigation measures.”***

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<sup>1</sup> WHO, Guidelines for Community Noise, 1999, page 48

In stating this requirement we believe the Director General is rightly seeking a statement that reflects an arms length review of the risks associated with the project. We believe this specifically seeks something stronger than a simple reiteration of the main findings presented in each section of the EA. Risk is perceived differently from the perspective of each stakeholder, and we believe this review should be constructed from the perspective of the stakeholders most bearing the impact of environmental and social outcomes – the Berry community. At the least, residual risks should be identified and explained as best possible.

As a relevant example, the evaluation criteria adopted by the noise assessment report are presented in the context that they provide optimum, or satisfactory, conditions. However, these criteria represent common industry standards accepting that 15 percent of “typical” affected residents will be “highly annoyed”. We do not believe the quiet rural environment represented by the Berry environs, and obviously other rural areas within the state, reflect “typical” resident environments and, therefore, that even strict compliance with the guidelines of the Noise Policy represents a considerable loss of amenity to the affected community. The EA presents a proposal in which many adversely affected properties are deemed ineligible for treatment, while others are deemed eligible for architectural treatments that show no awareness that owners’ may hold strong objectives to preserve their existing rural amenity.

The noise assessment report presents criteria and reports mitigation necessary to achieve compliance. The report does not examine the residual impacts at all.

## **ATTACHMENTS**

It is Berry Alliance’s understanding<sup>2</sup> that the Project, once approved, would become a scheduled activity under the Protection of the Environment Operations Act, 1997.

### **ATTACHMENT 1 – DEPARTMENT OF ENVIRONMENT, CLIMATE CHANGE AND WATER ENVIRONMENTAL ASSESSMENT REQUIREMENTS**

***“...The noise impact assessment should .....take into account adverse weather conditions including temperature inversions.”***

Notwithstanding that there are uncertainties in predicting the magnitude of adverse effects due to weather, we believe the DECCW clearly believes the intent of the noise impact assessment should be to make provision for the adverse effects of weather, not to simply acknowledge that these adverse conditions aggravate whatever level of impact is predicted and leave the impacted recipients to bear whatever further adverse effects are imposed.

***“...the noise impact assessment should identify the transport route(s) to be used, anticipated traffic movements, and expected increase in noise levels.....The method, data and assumptions used to assess the impact of road haulage on residential properties must be fully documented and justified.”***

We draw the attention of the Director General, and the DECCW, to the fact that not only is road haulage given little mention in the EA, the EA seeks extended normal work hours and work outside those extended normal hours to undertake work that clearly includes major concrete pours. Heavy vehicle haulage is a major concern and this aspect of major potential adverse impact is not adequately addressed.

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<sup>2</sup> NSW Government, Environment, Climate Change & Water correspondence to Mr Michael Young, Dept of Planning, dated 31 January 2011.



## **MONITORING PROGRAMS**

***The environmental assessment should specify and assess all monitoring programs for measuring noise, air quality and water quality.....***

The use of monitoring programs is a commendable proposal, providing the monitoring program has a focus on outcomes. Many monitoring programs produce reams of data, whereas the essential objective should be to predict potential non-conformances in advance and thereby avoid them. Retrospective monitoring should be avoided.

## **SHOALHAVEN CITY COUNCIL – KEY ISSUES SUBMISSION**

***(viii) One of the greatest deficiencies in the design ..... is that RTA have not provided two (2) off ramps to Berry for traffic entering Berry from the south.***

The Berry Alliance strongly endorses this concern. The highway severs the township and an obstruction at the Kangaroo Valley Road intersection, of any form, would render residents in the future major development area of Berry isolated from the town. Fundamental town and traffic planning objections have been raised by Shoalhaven City Council and the Berry Alliance fully endorses these concerns.

## **5. REVIEW OF THE RMS ENVIRONMENTAL ASSESSMENT REPORT**

### **5.1. Introduction**

No comments

### **5.2. Strategic and project justification**

This submission from the Berry Alliance principally addresses two of the six project objectives which we consider we are best qualified to comment on. These relate to environmental impacts and impacts on the local social environment.

### **5.3. Strategic alternatives and design options**

EA Section 3.1: Options Development Process

The Berry Alliance believes that when the RMS developed its initial long list of options and presented these to the community they provided insufficient background information on issues such as environmental and social impacts for the community to make an informed comment. It is also particularly concerning that the results of the previous 1996 Berry Bypass Value Management Workshop, at which the community was represented, were not considered as a basis for developing the long list of options and are ignored in this EAR. It appears to us the results of the previous 1996 workshop which supported a route to the south of Berry town represented an “inconvenient truth” for the RMS and were ignored. RMS continues to believe that the Berry community will accept a “North Street” route simply because this was, historically, the first suggested bypass of the main street.

The Berry Alliance notes that the project objectives, used by RMS to evaluate the route options, are heavily skewed towards benefits for the road user. Other than a brief mention of removing traffic from the old town centre, there is no evidence in the EAR of any process used to evaluate the major environmental and social impacts on Berry. When questioned by the community during the period they were considering the long list of options, the RMS only used “value for money” in discussing the impact of options. We contend that the impact on the Berry community was not adequately addressed during this period. For example the connectivity between “west” Berry where future housing growth will occur and “east” Berry which contains the social infrastructure (school, shops, etc) is vitally important, but was not considered significant by RMS and is not adequately addressed in the EAR. Within the next few years there will be more dwellings to the west of the new bypass (520) than in the original town to the east of the bypass (460). It should be noted that the term “West Berry” was coined by the RMS and is continually used in the EAR as a justification for the visual and, apart from one bridge, physical severance of this area.

We ask DP&I to seek justification from the RMS why they ignored the results of the 1996 Value Management Workshop both in this EAR and in developing the long list of options. We also ask the DP&I to require RMS to provide the detailed methodology of how RMS evaluated the long list of options and the community input to these options. We further seek evidence that the specific issue of “severance” between east and west Berry was considered in this process.

In selecting the short list of options the EAR (page 20) states that the route options and access options were evaluated by a “value management workshop” approach. The Berry Alliance contends that this is a flawed approach as it does not sufficiently evaluate environmental and social impacts. The fact that RMS had to modify both the access

arrangements and the alignment around Berry subsequent to these workshops demonstrates this. We contend that as a result of a flawed “value management workshop” process RMS got the access options for Berry wrong; the Berry bridge wrong; the northern interchange for Berry wrong; and alignment along North Street wrong! All needed change after the “value management workshops”. The fact that route selection has been so controversial in the community is evidence that this process is clearly flawed. We believe that RMS did not provide sufficient information on environmental and social impacts to adequately evaluate these in the “value management workshops” and believe the workshop outcomes were highly subjective.

We also note that the results of the 1996 Berry Bypass Value Management Workshop was not presented to the 2007 Value Management Workshop and not considered during the workshop. We think this is extraordinary!

We ask DP&I to formally ask the RMS why they ignored the results of the 1996 Value Management Workshop in the 2007 Value Management Workshop and ask RMS to explain how they weight social and environmental impacts in these processes without having the baseline information on environmental and social impacts.

The EAR also contains no mention of the results of the Peer Review instigated by the Roads Minister in early 2008. This review found that the evaluation process had been flawed and that a southern option for the Berry Bypass should have been shortlisted.

We ask DP&I to seek justification from RMS why this important information was excluded from the EAR.

The EAR does not adequately explain that the CRG was established at the instigation of the Member for Kiama after representatives of the community met with the Minister for Roads in 2011. This meeting was sought after years of frustration dealing with the RMS and as a result of the RMS ignoring suggestions to reduce the adverse environmental and social impact of the road. The subsequent relocation of the northern interchange, the lowering of Berry Bridge, the diversion of Town Creek and the lowering of the road along North Street were all suggestions made by the community after the RMS “preferred route” was announced in 2009 but ignored until the meeting with the Minister for Roads in mid 2011. This is an important perspective when considering the RMS approach to community consultation discussed later in this submission.

Better Options for Berry (BOB) constructively participated in the CRG process but felt there were a number of important issues that the refinements did not adequately address. These include the vertical and horizontal alignment along North Street, the impact of the Southern Interchange on the connectivity between “east and “west” Berry, and the proposed closure of Victoria Street amongst others.

These outstanding issues are covered in more detail in other parts of this submission.

On page 25 of the EAR a statement is made about the impact of pedestrian access in Berry as if it is confined to severance of North Street. The connectivity between “west” Berry where most of the future housing growth will occur, and “east” berry, which contains the social infrastructure including the school and the shops, is of importance and is not adequately addressed in the EAR. DP&I recognised this in their issues list (EAR page 142). RMS has not addressed the social dislocation caused by the Southern Interchange in the EAR.

#### **EAR Section 3.4: Long List of Options-Evaluation of Options (pages 29-31)**

The Berry Alliance notes that community representatives did not participate in this evaluation process. As outlined earlier in this submission, the validity of the selected long list of options is questionable when the option selected in the RTA Value Management Workshop conducted in 1996 was not included in any of the options. Surely this should have been the basis for developing the long list of options? We also note the process for evaluating the long list of options is not covered by the EAR.

We request the DP&I ask the RMS why they did not use the 1996 Value Management Workshop as a basis for developing the long list of options and why community representatives were not invited to participate in the formal process for evaluation of the long list of options.

#### **EAR Section 3.5: Short-listed Route Options (pages 32-40)**

It is of concern that all the short listed route options join the existing highway alignment at Kangaroo Valley Road. As environmental and social impacts had not been fully evaluated at this stage prudence should have dictated that a route going south of Berry township be retained at this stage.

The short list of options released in 2007 did not include a southern option. The route option shown in Figure 3.8 and discussed on page 35 was not proposed until December 2011 and should not be included in this section. The evaluation results shown in Section 3.5.2 refer to southern options included in the 2006 long list of options and are not applicable to the 2011 proposal. It should be noted that the 2011 proposal closely followed the Southern Route developed in the 1996 Berry Bypass Value Management Workshop.

The 2011 southern option proposal was evaluated on cost only. The major benefits it provided in avoiding severance of the Berry community, maintaining links to the escarpment and minimising noise impacts, were excluded from consideration. This misrepresentation in the EAR is of concern as social and environmental issues relating to the southern option had not been reviewed.

The language used to describe the route evaluation in pages 37-40 of the EAR is very subjective and does not adequately explain the basis for the decisions or the relative weighting given various factors.

The Berry Alliance asks DP&I to seek justification from RMS why the EAR covered the Southern Option in this way when it was not part of the 2006/2007 route selection process. We also ask for details of how the weighting of environmental and social factors used in the evaluation of route options were developed when the baseline information on these factors was not known.

On page 40 the EAR states "*The preferred option was considered to provide the best outcome for the local environment and the community*". It is not explained how this outcome was reached. It is imperative that RMS be asked to provide more detail as to how this decision was reached.

## **EAR Section 3.6: Design Refinement Options**

### **EAR Section 3.6.1: Access Options for Berry (pages 44-45)**

#### **Evaluation of Access Options**

There is no reference to access options workshop in EAR or on the RMS website apart from the listing of outcomes. The Berry Alliance requests DP&I ask RMS how and when these workshops were held, who attended and what factors were used to evaluate access options? Was the petition of over 1100 signatures developed by the Berry Alliance and presented to the NSW Parliament in 2010 considered as part of the evaluation of access options?

The Berry Alliance supports Shoalhaven City Council's call for a second north bound off ramp for Berry.

#### **Split Southern Interchange (EAR page 46)**

This is rejected by RMS purely on the grounds of "value for money". The EAR claims that moving the location of the Southern interchange at Kangaroo Valley Road will not meet "*social and environmental adverse impacts*" tests. The Berry Alliance asks DP&I to request an explanation from the RMS as to how the Split Southern Interchange fails to meet these tests. The "social and environmental impacts" of leaving the southern interchange where it is need to be fully addressed in the EAR. The EAR states that the impact in this area will be high and presents "mitigation" measures to camouflage and distract from this fact.

#### **North Street Corridor (EAR Section 3.6.4 page 51)**

##### **Options for the Location of the Alignment along the North Street Corridor**

The EAR does not adequately explain the methodology for evaluation of options for the North Street Corridor. The Berry Alliance requests that DP&I ask RMS for details of the methodology used for evaluation of options for the North Street corridor. In particular, how was it decided in quantitative terms that the 50/50 option for route alignment between the Miller property and North street properties rendered the Miller farm non-viable? Was an independent opinion obtained? This is a very important issue for the future amenity of the residents of North Street and the Berry township.

##### **Options for Lowering the Alignment along North Street (EAR page 51)**

The EAR does not adequately explain why mechanical pumps cannot be used to drain the road and its abutments. Many pieces of essential infrastructure such as power stations and airfields use this method.

Further lowering of the road along the north side of Berry would significantly reduce the noise and visual impact on the town and this option needs a more detailed review than outlined in the EAR.

The Berry Alliance requests that an independent expert's workshop similar to that which was conducted on the Berry bridge involving community members be established by RMS to determine if further refinement of the alignment of the North Street corridor is possible.



### **Closure of Victoria Street (EAR section 3.6.6 page 57)**

Discussed further in section 5.7.1 of this document.

### **Southern Bypass of Berry (EAR section 3.6.7 Page 57)**

As covered above in comments relating to Section 3.5.3, the southern option proposed in December 2011 was evaluated on cost only. Statements in this section referring to an evaluation against project objectives are false. The evaluation relates to different southern options reviewed in 2006 under a process found to be flawed by the Peer Review.

The December 2011 southern option was proposed by Bruce Ramsay, a semi-retired road designer/engineer of world renown. Bruce also provided RMS with the design improvements approved for the Northern option.

The quoted cost difference of \$150 million largely relates to the cost of imported fill for embankments on the southern option. Bruce subsequently provided a balanced cut & fill design which removed the need for imported fill, but RMS refused to accept his design. Unsurprisingly, an 'independent reviewer' who was appointed and paid by the RMS Project Director would not intervene.

## **5.4. Description of the project**

No comments

## **5.5. Assessment process**

No Comments

## **5.6. Consultation**

### **EAR section 6.1 Consultation Objectives (page 123)**

There is little doubt that RMS has been very efficient in getting information out to the community through their website and the project office in Berry. We commend RMS for this although sometimes the amount of information seemed to overwhelm most members of the community. We particularly commend RMS on their effective consultation with property owners directly affected by the new highway.

However, the process of evaluating community comments on the environmental and social impacts of the highway upgrade has not been transparent. These community comments are diligently recorded but how these comments are evaluated is not clear leaving the community with the feeling that their comments are not valued by RMS. We request DP&I to ask RMS to outline the processes used to rank the importance of these comments.

We strongly contend that the objectives of building an ongoing relationship with the community and encouraging community involvement have not been achieved.

### **EAR section 6.2.3 Review of Berry Bypass (Page 135)**

The Northern Bypass of Berry was described in the 2008 RTA Project Report as a “slender & unobtrusive design that fits into the landscape.” However, the design produced by RMS in early 2011 bore no resemblance to that earlier description. This caused serious concern in the community as reasonable design alternatives put forward by the BOB committee were dismissed by RMS. BOB needed to enlist the help of State MP Gareth Ward and Minister Gay to force RMS to listen to community concerns and to agree to the formation of a Community Review Group

RMS initially restricted BOB to one participant in the CRG, but eventually four BOB members participated constructively in CRG meetings.

The Berry Alliance particularly commends RMS for setting up a design workshop on the design of the Berry Bridge which involved four industry experts, four RMS staff and five community members, including Bruce Ramsay, a semi-retired road engineer/designer of world renown. Over two days the workshop used Bruce’s proposed improvements to refine the design of the Berry Bridge by lowering it by up to six metres and moving it ninety metres away from the Berry town centre and minimising the number of expansion joints. This modified design has been accepted by the Berry community as the optimum outcome without moving the RMS “preferred alignment”.

The Berry Alliance contend this approach should be used as a model to resolve remaining issues such as the height of the alignment along North Street and the social and environmental impact of the Southern Interchange. The Alliance requests DP&I to ask RMS why they refused repeated calls from the community to establish an “expert workshop” involving community participants to resolve these issues.

### **EAR Section 6.3 Summary of Issues Raised in relation to the project**

#### **EAR 6.3.1 Issues raised by Government Agencies (EAR Page 142)**

We note on page 142 of the EAR that DP&I request that Pedestrian connectivity between Kangaroo Valley Road and Berry be maintained. The Berry Alliance contends that the

issue of pedestrian connectivity is not adequately covered by section 7.10. Pedestrians will have to cross two major roundabouts to walk from west Berry to east Berry where most social infrastructure is located.

### **EAR 6.3.2 Issues Raised By Local Government (EAR Page 143)**

Shoalhaven City Council page 143

Two off ramps to Berry from south including north bound exit at Woodhill Mountain Road to minimise impacts at Huntingdale Park roundabout and minimise through traffic through Berry. This was supported by a petition coordinated by BOB of over 1100 signatures in November 2010 and presented to the NSW Parliament. BOB support the call by SCC for a second north bound exit. This is not adequately covered in Section 7.1

Shoalhaven City Council page 144

Shared pathway from KV Road to Berry on north side of road crossing under road at Berry Bridge. This is not adequately covered in section 7.10

### **EAR 6.3.3 Issues Raised by Community (EAR page 145)**

A total of 161 separate issues were raised by the community with respect to the inadequacies of the preferred route. These have been categorised in the EAR as follows: Design 12, Consultation 9, transport and traffic 32, noise and vibration 27, terrestrial ecology 8, surface water and ground water 3, flooding 8, landscape character and visual amenity 21, non-aboriginal heritage 8, land use and property 1, socio economic 40, air quality 2.

This clearly shows the community are concerned about the environmental and social impacts of the proposed RMS "preferred route"

Without knowing the specific detail of the issues raised it is hard to determine whether RMS has adequately addressed these issues in the EAR. The Berry Alliance requests DP&I appoint an independent auditor with appropriate skills to assess how these environmental and social issues are addressed in the EAR.

### **EAR 6.4 Future Consultation (EAR Page 159)**

The Berry Alliance believes that Section 6.4.1 and section 6.4.4 dealing with future consultation are far too subjective and open for interpretation by RMS and their contractors. For this reason they are totally inadequate. No formal process for future community consultation has been recommended. The Berry Alliance requests that DP&I request that RMS meet with members of the communities impacted by this project to establish formal processes for future community consultation including reforming the Community Review Group and appointment of an independent Community Advocate and that these processes should be approved by DP&I rather than RMS.

## **5.7. EAR Section 7: Assessment of key issues**

### **5.7.1. EAR Section 7.1: Traffic and Transport**

With respect to the DGRs, our concern is with changes to local road connectivity and access and impacts on local traffic arrangements and local road capacity/safety. The EAR does not address the future impact of increased traffic on Berry once the Nerriga Road upgrade is completed. This will provide a new route for traffic from both Canberra and the Hume Highway to the South Coast and beyond.

#### **EAR 7.1.1 Methodology**

We have concerns around assumptions and processes used in modelling and forecasting. See under 7.1.3 Assessment of potential impacts, Victoria Street, in following pages.

#### **EAR 7.1.3 Assessment of potential impacts**

##### **Construction Impacts**

##### **Impacts on network performance (LoS)**

The estimate of 3% shift of total through traffic between Gerringong and Bomaderry to the 'Sandtrack' during construction seems low, and we request that traffic volumes be monitored during construction, particularly during on-line construction periods. Appendix D Figure 2.1 states that the 'Sandtrack' is favoured by many local vehicles to avoid delays behind slow moving, heavy vehicles. We question whether, with the influx of such vehicles during construction, there will be a greater than 3% move across to the 'Sandtrack'. Our concern also includes any subsequent increase on the access/egress roads between the 'Sandtrack' and Berry (Beach Road/Tannery Road and Coolangatta Road/Prince Alfred Street).

##### **Operational Impacts**

##### **Victoria Street** (including Mark Radium Park)

The process undertaken by RMS in reaching the decision to advocate for the closure of Victoria St relied heavily upon minimising impact and land-take of Mark Radium Park (RMS Meeting Notes, 23 May 2012). Key data used at this time is now known to be incorrect. These amended figures are reported in section 3.6.6 only:

- |          |   |
|----------|---|
| Option 1 | Closure of Victoria St / one-way ramp 25% (previously 13%)            |
| Option 2 | Victoria St open / one-way ramp 24% (previously 17%)                  |
| Option 3 | Victoria St open with roundabout / two-way ramp 29% (previously 26%), |

Table 7-21 states that, as a positive impact of Option 1, it has the 'least impact and land take of Mark Radium Park'. This is incorrect. Option 2 has the least, and the difference between all options is minimal at only 4%.

Similarly, Appendix D, 7.2.7 Victoria St design options (pp. Appendix D-97 to D-98), incorrectly states that:

- Option 1 would have 'very limited (although not zero) impact on Mark Radium Park' (the figure is actually 25%), while
- Option 3 would 'require utilising a portion of Mark Radium Park, extending to and including part of the 'duck pond' water feature'.

Incorrect data was used in the RMS decision to proceed with Option 1. Correct reporting of figures is required for accurate submissions from a properly informed community. This is a serious shortcoming of proper process by RMS, and it does not meet even the baseline expectations for a project of this type.

Mark Radium Park currently functions primarily as a travellers' and workers rest stop and as such is well used. Locals do not use it but local Parkcare volunteers assist in its maintenance. Two way access around Mark Radium Park, with adequate signage on the highway, would best preserve the park as a tourist facility in a tourist town. Cycleway linkage to the park is requested, as it may encourage use by locals.

Section 7.6 of the EAR (p.338) states that, 'In general, Berry's character is one of an intimate historic rural town'. RMS Urban Design Principles include the need "*to respect the communities and towns along the highway*". Accordingly we seek the best preservation of the character and use, not only of the park but of this southern end of Queen St. Building the road to the standards of Berry's heritage street grid, approximately six metres in width, would reduce visual and physical impact of the bypass in this area while still allowing room to pass stranded vehicles. Only when it becomes the southbound on ramp should this road be built to RMS highway standards.

The least impact upon Mark Radium Park would be achieved with Queen St extended as a two-way, local street past the park, with a built to 'local standards' Victoria St roundabout, under the responsibility of Shoalhaven City Council (SCC).

We support consideration of extension of the two-way local road from Queen Street in a direct line past Victoria Street and on to the nursing home, BUPA with access provided for them. This would allow convenient access/egress to the private residence (Vannini) and BUPA. After BUPA, the street would reduce to one lane, which would then become the southbound on ramp for the highway. There are no houses in this area. The visual and noise impact of the on ramp would be moved out of town.

Therefore, Option 3 (with modifications), provides the best park outcome (least footprint and reduced noise with the on-ramp moved) while ensuring traveller access. It also ensures minimisation of the impact of changed traffic flow on other streets in Berry.

### **Regarding local road traffic impacts**

The Appendix D Victoria Street AADT flow diagrams, F1-4, and all judgements and statements relating to these diagrams to be found in Volume 1, eg.pp198-200 of the EAR and Appendix D of Volume 2 pp99-105 should be removed from the EAR as they are incorrect.

In Appendix D, 7.2.7 Victoria Street Design Options, under Traffic distribution model development (Appendix D-101), the wrong assumptions employed in predicting re-distribution of traffic under the different Victoria Street options make any accurate prediction impossible. Residents from the south of Berry who live in Clarence St, Gwenda Ave, King St, Albany Lane, and the southern ends of Albany and Alexandra streets contribute greatly to traffic flow on Victoria Street. They have not been captured in traffic measurement and are not shown on the flow diagrams. The western end of Victoria St including BUPA, the Arbour, the Grange and Windsor Drive are located above any device placed opposite Mark Radium Park. It seems that predictions were made relating only to the volume of traffic entering and exiting the highway. There is no sole connection between this traffic and the traffic found on George, Edward, Albany and Alexandra



streets. That could also come from the areas not measured.

The assumption of 'Existing volumes and proportions of total AADT across George Street, Edward Street, Albany Street and Alexandra Street' to predict re-distribution suggests that with Victoria St closed (or partially) traffic will continue to use these north/south roads in the same proportions that they do pre-bypass. Under all options *existing proportions cannot* be sustained – permanent closure of the right turn into Victoria Street alone will significantly change both proportions and volumes from “day one”.

It has been calculated using RTA Traffic Generating Rates that, with closure of Victoria St, *1500 vehicles per day from western end of Victoria Street residences* will use the Victoria/George St intersection with an estimated 900 of these turning into George St. Had this traffic been factored into RMS data, it would have been spread across all north-south streets. This is not valid, as all will primarily use George St as the fastest route to access destinations north, south or west of Berry. It appears that neither the potential impact at this intersection, nor the correct proportional traffic increases and impacts on George and Edward Streets have been presented by RMS. Due to the nature of the George/Victoria Street intersection, we believe that there is a greater potential for traffic conflicts to occur here with an increase in traffic. **The process appears flawed to the detriment of proper consideration of environmental and social impact upon local streets, as well as introducing potential traffic conflicts and safety issues.** These two streets have one-sided or no footpaths and there is cycle and pedestrian activity on a daily basis. We are concerned that the increase in traffic on George Street will exceed the RMS' own environmental flow criteria, also the “levels of acceptable diversion” based on AUSTROADS guidelines and NSW Road Traffic Noise guidelines. It does not properly address the DG's requirements for changes to local road capacity/safety impacts from traffic rerouting and modified access.

An O-D survey to determine peak use was carried out on Victoria St on a market day. This highly popular market is reputed to be the largest craft market in NSW, drawing visitors to Victoria St from points well outside the Shoalhaven. The market is busy from 8am, crowded by 10 am and doesn't begin to clear until after 2 pm. The capture of Victoria St data only between 10 am - 2pm gives no indication of how busy the street can be.

Emergency vehicle access/egress to the aged care and seniors living facilities on Victoria St will be affected under Bypass conditions and worsened with Victoria Street closed.

Option 1 has the largest impact on the local road network and for this key reason, it is rejected. There will be more than three times the daily traffic volumes on the local north-south roads in 2037, reducing to two times the volume under Option 2 and 3. Option 1 confers the highest level of disadvantage to these local streets, with one-sided or no footpaths and narrow bridges. It interrupts connectivity and existing traffic movements to the greatest degree and introduces potential safety issues to pedestrians and cyclists. It should be noted (p199 Volume 1) that only Option 1 will reduce Queen St to LoS C in 2037. This should not be listed as a positive for Option 1.

In Table 7.16 it is stated that only 45 vehicles per day would travel northbound along a two way road past Mark Radium Park. This is questioned, as a two-way road would provide access to the Kangaroo Valley Rd interchange for all KV Rd-bound and north-bound residents of the western end of Victoria St (including BUPA, The Grange, The Arbour and Windsor Dve), and others from local streets. It would be the key road for highway travellers entering and exiting the park (keeping this traffic, including towed boats/caravans, etc out of George Street). At present to turn right here would be to

encounter busy highway traffic accelerating towards you after the speed camera. Locals see this as too dangerous.

From a public interest viewpoint, it appears to the Berry Alliance that the level of disadvantage that would be imposed upon the four north-south streets (Alexandra, Albany, Edward and George St) under Option 1 is greater than the level of advantage provided to Victoria Street, which will have reduced traffic regardless of any option. Option 3 (with modifications) provides the least traffic increase/impact on the north/south streets and the best options for Mark Radium Park. It best maintains current traffic patterns, provides the best connectivity by keeping a key collector road open and allows ease of access to and around Mark Radium Park.

Adopting a modified Option 3 would also best meet the DGRs by

- minimising impacts on local traffic arrangements
- maintaining connectivity, not severance, of a collector road
- have least impact upon Mark Radium Park and provide best traveller access
- provide best emergency service access for western end of Victoria St.

### **Public transport, pedestrians and cyclists**

In preventing school buses from stopping at informal locations and making limited dedicated bus stops, adequate parking areas need to be made available for parents waiting to pick up their children.

Re-routing of pedestrians and cyclists due to severance of North St is a concern for the community. We would welcome consideration of a walk/cycleway running along the northern side of the bypass from Rawlings Lane, to cut under/go over the bypass and connect to the cycleway on the southern side. Cyclists/pedestrians could then access town and the sporting fields without having to go through the Kangaroo Valley Road interchange.

### **Connectivity issues and Environmental Risk Analysis**

The EAR does not address the issue of a possible blockage of the Queen St roundabout in its Section 9 environmental risk analysis. If Victoria St Option 1 was adopted, this roundabout would be the only southbound exit point in the town. Table 9.2 mentions the possibility of a major incident closing the sole access between Berry and West Berry on the Kangaroo Valley Rd overpass. It is not acceptable to say that this would be managed with a critical incident plan. **This plan needs to be prepared and presented to the Department of Planning and Infrastructure and to the community in this planning stage of the bypass.** The optimal way to manage the risk is to have more than one route to the South and to the West. Victoria Street Option 3 would achieve this for the south. RMS has failed the community by only providing one route to the west after closing the alternative route, North St. Planting trees here to screen views of the bypass below and the possible writing of a plan are not acceptable measures to minimize impact.

The Berry Alliance believes that southbound motorists will experience significant delays in peak periods as they merge from the bypass to the old two-lane highway. This will impact on the ability of Berry residents to access the highway from the southbound ramp. We request assurance from the State Government and the RMS that the missing link between Berry and Bomaderry will be given the highest priority in funding.

## **5.7.2. EAR Section 7.2: Noise and Vibration**

The following comments refer to section 7.2 of the Environmental Assessment Report, together with Appendix E of the EAR.

The Berry Alliance is concerned that the noise and vibration assessment presented on behalf of the RMS lacks rigour. The EAR is cursory in review of many critical aspects and dismisses many significant concerns with little or no technical justification.

### **EAR 7.2.2 Existing Environment**

Berry is a historic rural town with an important role in local tourism. The existing noise environment is influenced by the passage of the Princes Hwy through the town and positive noise and safety benefits are foreseen for the central business district with the implementation of a Bypass.

The surrounding countryside is rural and rainforest. Light aircraft flyover is relatively common in some areas, however in large measure the existing ambient noise environment is not dominated by any single noise source. In most areas surrounding the highway, sound from mechanical sources is a secondary feature.

The values presented in Table 7-25 are stated to be road traffic noise levels. The Director General should note that the values measured as LAeq can not be categorically stated as being due to traffic noise. In urban areas, traffic flow almost invariably dominates the background noise levels, and the LAeq, however a multitude of sources affect the ambient noise in rural areas. Many sources of noise occur more commonly during the daytime – birds, animals, agricultural activities, traffic, wind, some insects. It is not valid to assume the measured LAeq noise levels obtained from an unmanned logger are due to traffic noise.

### **EAR 7.2.3 Noise and Vibration Criteria**

Most of the criteria set out in section 7.2.3 of the EAR are extracts from the various reference documents given in the Director General's requirements.

The criteria mentioned for the assessment of Sleep Disturbance are consistent with those stated in the NSW Road Noise Policy. The proposed assessment criterion is that that the  $L_{A1(1 \text{ minute})}$  rise no higher than 15dB above the background  $L_{A90(15 \text{ minute})}$ . From a practical viewpoint, these values are retrospective measurements and raise complex problems of compliance review. The  $L_{A1(1 \text{ minute})}$  is numerically close to the  $L_{A(max)}$  and the Berry Alliance proposes that the  $L_{A(max),traffic}$  measurement be used for the operational stage assessment. The  $L_{A90(15 \text{ minute})}$  is a value that can only be evaluated after the event, and notably applies to a different time period from that of the intrusive noise event. For monitoring of compliance, Berry Alliance proposes that the threshold value used for evaluating the magnitude of emergence of the  $L_{A(max),traffic}$  be deemed to be the  $L_{A90(15 \text{ minute})}$  occurring at the time.

In relation to the construction stage and any out-of-hours works, a similar comparison of  $L_{A(max)}$  and the  $L_{A90(15 \text{ minute})}$  occurring at the time would be preferred.

The Berry Alliance acknowledges that audit measurement necessary to evaluate sleep disturbance requires a manual measurement survey procedure. As the objective of the audit is to evaluate specific loud events, these cannot be easily determined from unmanned statistical data recorded using a logger. If a pair of unmanned loggers is

utilised, one obtaining 1 minute period  $L_{A1}$  samples and the second 15 minute  $L_{A90}$  samples, we are concerned that the quantity of potentially irrelevant data will render the procedure useless, and the delay in being able to issue any compliance report impractical. An unmanned logger is unable to distinguish between a loud truck pass by affecting a wide area and a loud frog somewhere near the instrument.

The Berry Alliance trusts that verification of this aspect of the project compliance will be insisted upon by the Director General.

Recent work reported by the World Health Organisation is relevant to consideration of sleep disturbance and is reviewed later in this report.

#### **EAR 7.2.4 Assessment of potential impacts**

We are not confident that the interviews carried out with residents potentially affected by extended construction hours (page 222) can be considered to provide sufficient evidence of community support for extended hours and out-of-hours work. In particular, potential for sleep disturbance is mentioned as a risk. The statement that "Potential impacts on sleep disturbance would need to be included in any future planning for out of hours work" is, technically, a meaningless statement. The Berry Alliance considers this assessment statement should state:

***Control of impacts on sleep disturbance is an obligatory inclusion for advance planning of any out of hours work as part of the Statement of Commitments.***

The assurances regarding potential impacts from increased traffic noise due to construction traffic (page 225) are inconsistent and do not appear justified. The statement that "increase in construction traffic during the night-time period is not predicted for this project as the extent of haulage activities is not currently known" is illogical and misleading for an environmental assessment report. The potential for adverse noise impact from haulage requires acknowledgement and a commitment to undertake assessment for standard, extended and out of hours works must be stated.

The high frequency of occurrence of temperature inversions and wind effects is noted (page 236) in the EAR. The Berry Alliance rejects the statement that "There is no requirement to meet the noise criteria under adverse weather conditions". It is totally unreasonable for an Environmental Assessment report to note that adverse weather conditions occur effectively half of the time and then undertake no further consideration of the effect on reasonable noise mitigation treatments. In fact, the frequency of occurrence of adverse weather conditions is likely to be higher for Berry than the more coastal records of Gerroa would indicate.

#### **EA Report Appendix E**

The Executive Summary confirms that construction noise impact at affected dwellings is predicted to exceed the preferred guideline levels but to not exceed "highly affected" levels. The highly impacted level equates to a very substantial adverse impact and this conclusion is hardly encouraging.

It is unclear who is "recommending" working extended hours. The Berry Alliance does not believe this is a recommendation, but it may well be a proposal. The only meaningful basis for recommending extended hours is to lessen the duration of impact, and this

feature may be a positive proposal. However the EAR does not appear to justify or quantify this objective, but simply states that the extended hours are “recommended”.

The Berry Alliance agrees with the management principle described in the report of establishing “safe working distances” and utilising a suitable measurement monitoring program to progressively confirm the site specific distance limits. Our main concern with the summary of mitigation methods is that this monitoring is suggested only inside the safe working distance, suggesting the only objective is to establish if the distances can be lessened. However, it is essential that the Director General recognise the distances could equally likely expand and monitoring should consider larger as well as shorter distances.

The interpretation of the Environmental Report is complicated by the regular use of the term “recommended”, where the Berry Alliance believes this should state “anticipated”. The responsibility to determine much of the detail of mitigation treatments has been delegated to a subsequent Noise and Vibration Management Plan to be prepared by a contractor. Using the term “recommended” appears to abrogate the responsibility of the later report to rigorously investigate treatment options, with the result that the community is asked to be reassured by the fact that a later report will resolve all problems, but in the context that the community can only trust that the treatments that are “recommended” in the EA Report. This is unreasonable. An equivocal statement that the concept design may or may not meet the design criteria, justified by the excuse that a later report will be prepared, is not a binding undertaking.

#### **Appendix E – 1.1 Overview of the Proposed Works**

A draft or guideline construction program would considerably enhance the ability of a potentially affected reader to interpret and understand the potential impact of these works.

The report states that computer modelling has been conducted for both the existing road build and no-build scenarios, and for the upgraded highway. It would help the non-technical reader, very significantly, for the report to present noise mapping contour results for the existing road to enable a visual comparison to be made between the existing and new situations. The existing information may well have been rigorously scrutinised for the report, however the reader is not able to verify that. Noise mapping would be very useful.

#### **Appendix E – 1.2.2 Extended Working Hours**

This section does provide some explanation of the reasons for proposing extended working hours. We are not certain if the restriction to areas for which extended hours are proposed (between northern Berry interchange and Toolijooa Road) is clearly stated in the project Application or is just a reassurance. While this may appease some concerns of residents of the township it is, of course, no solace to the residents north of the township. The restriction to working area is also relatively meaningless if haulage is ignored in the review of potential impacts, as it does appear to have been.

#### **Appendix E – 1.2.3 Out of Hours Works**

The work described in 1.2.3 is inconsistent with the important statement made in 4.1 where concrete placement is expected to occur during evening and night periods. 1.2.3 appears misleading and this concern is only aggravated by the issue that haulage (e.g. concrete) is ignored in the EA report.



## **Appendix E – 2.6 Operational Noise Monitoring Results**

The finding that traffic noise is the dominant noise source in the area is not a valid statement for the overall area potentially affected by this project, particularly from the perspective of future sleep arousal.

The values given in Table 2-3 do not correlate with those given later in Table 4-26 for what appears to be the same source. This section of the report appears unreliable.

### **Appendix E – 3.2.1 Sleep disturbance**

The Berry Alliance is concerned that this section glosses over the extent of this potential problem. In the context of our earlier relevant discussion (see page \*) of sleep arousal criteria and the background noise levels reported by Appendix E, this section of Appendix E should state that noise events in the order of 48-55dB(A) have the potential to exceed the Director General's requirements. Remarkably, this value is numerically almost identical to the value reported in the following paragraph for an alternative reference apparently more desirable to the EA report appendix.

However, the EA report appendix then presents a minimal numerical argument to raise the acceptable criterion by 10dB(A). In claiming the benefit of attenuation of external noise through an open window, the author of this section does not acknowledge that the emergence of the noise event will often remain the same, as both the event and the background noise are similarly attenuated. In fact, the emergence can increase for strong low frequency noise sources. This is not an argument through which the proponent can weaken the criteria for managing sleep disturbance.

The Berry Alliance does not accept this argument and believes the Director General should demand a more rigorous review of this potentially serious aspect.

### **Appendix E – 3.5 Operational Noise Criteria**

The Berry Alliance acknowledges that the design criteria set out in the EAR Appendix E, and used elsewhere in the EAR, are drawn from the requirements set out by the Director General. It is important to note that important criteria are drawn from the guidelines contained in the Environmental Noise Management Manual of the RTA<sup>3</sup> and the NSW Road Noise Policy of the DECCW. The RTA is, of course, the Proponent. Importantly, one critical concern is the relative increase criterion set out in Table 3-16 of Appendix E, which permits an increase of 12 dB(A) to the existing road traffic noise level. This value was introduced by the RTA a decade ago<sup>4</sup> as an endeavour to limit the impact in situations where the existing background noise level is very low and where, theoretically, even higher increases could result from a redeveloped road complying with the appropriate operating limit noise criteria. Despite the appropriateness of the original RTA concern, the UK Design Manual for Roads and Bridges<sup>5</sup> indicates that the portion of people who would be "bothered very much or quite a lot" by the magnitude of change that this "acceptable" criterion represents would be almost 50 percent.

The examination of this criterion is generally poorly implemented. The community has no option but to trust the veracity of large and complex computer noise modelling to predict overall expected levels, but is not offered comparable modelling of the existing conditions

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<sup>3</sup> RTA, Environmental Noise Management Manual, 2001

<sup>4</sup> This criterion was not included in the EPA document "Environmental Criteria for Road Traffic Noise", 1999, but was included in RTA "Environmental Noise Management Manual", 2001.

<sup>5</sup> UK Design Manual for Roads and Bridges, 1994, part 7, Figure 3

against which this can be considered. Instead, relatively discrete single-point locations are inspected and the existing conditions deemed to be representative of the overall existing impact. The limit level change identified in the NSW Road Noise Policy<sup>6</sup> applies to the specific source of road traffic noise and not simply to the LAeq level. A rigorous examination would involve subtraction of the existing traffic modelling results from those predicted for the new traffic models, and identification of all areas where the value exceeds 12dB(A). We believe this calculation strategy would capture many more areas than the methods applied in this EA report.

#### **Appendix E – 4.2.2 Construction Noise Modelling**

The use of computer modelling is accepted as an essential means of evaluating a large scale project. From the perspective of the affected residents, a statement that a computer model has been used does not allow the reader to verify the reasonableness of the inputs. A sample single point calculation would be of considerable assistance to the reader. A critical aspect, for example, is whether any consideration has been given to the adverse effects of tonal or impact noise sources, such as piling, and to the penalty weightings normally applied to their assessment. This quality of this assessment procedure remains uncertain.

#### **Appendix E – 4.2.3 Standard hours works**

The use of the term “impacted” is inconsistent and this complicates the ability of the non-technical reader to be reassured by the EA report. Section 4.2.3 simply serves as an example. Conclusions mentioning the term “impact” range from reference to the expected measurable level of noise due to a source through to situations where impact refers only to those areas predicted to exceed the reference assessment criteria. Impact is a non-technical term and it would perhaps be prudent to use the terms “conformance” and “exceedance” more commonly.

#### **Appendix E – 4.2.4 Morning Shoulder works**

How can the inclusion of Table 4-11, discussing impact piling, be consistent with the reassurances given in section 1.2.2 that work would be restricted to various benign tasks? Impact piling during extended hours should be prohibited.

The use of the term “worst case” is also inconsistent, with 4.2.4 being a typical example. The EAR appendix has presented summary scenarios for the “most noise intensive” activities but not during adverse weather conditions. As noted earlier, adverse weather conditions could be reasonably expected for perhaps 50% of the time, so worst case examples considered in part 4.2.4 could well be typical cases.

These scenarios do not reassure that the Director General has been presented with valid conclusions regarding potential noise impacts.

#### **Appendix E – 4.2.5 Sleep Disturbance**

The comments made in 4.2.5 reinforce the Berry Alliance concern that sleep disturbance is a significant risk for the affected areas of the community.

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<sup>6</sup> DECCW “Road Noise Policy”, 2011, page 15

## **Appendix E – 4.3 Specific works**

The information given in section 4.3 could be misunderstood. The Berry Alliance understands that a range of scenarios has been modelled using an aggregate construction equipment sound power level of 112dB(A) re 1pW during “typical” work activities, and an aggregate sound power level of 120dB(A) re 1pW during “loudest” work activities. These generalisations are not unreasonable however the Director General must be made aware that the worst case noise propagation conditions are additional to these source noise effects. It is also unclear how the reader is expected to make use of the work duration activity schedules with respect to the predicted noise immission levels given in the preceding tables. There seem to be no conclusions able to be drawn from section 4.3.

The Director General should note that there has been no indication that penalty loadings have been included for the situations where impact noise is likely. This is a significant omission and one that is clearly detrimental to a fair assessment for the adversely affected community areas.

## **Appendix E – 4.4 Ancillary works**

Section 4.4 confirms there are no batching plants forming part of this Application. The Berry Alliance is concerned that the absence of any review of noise due to haulage is a serious omission. We believe the Director General cannot allow approval of extended hours without further justification. We also believe the DECCW will have similar concerns.

Section 4.4 does provide the conclusion that the predicted noise levels due to activities within site compounds are likely to exceed appropriate criteria.

## **Appendix E – 4.5 Cumulative impact**

Section 4.5 explains that cumulative noise could result in higher levels in areas close to site compounds than those already predicted to exceed the management levels. The probability of cumulative noise occurring is obviously almost impossible to predict meaningfully, however it is quite misleading to state that a further change of plus 3dB(A) would not be significant. Human reaction to noise tends to follow an exponentially rising curve and compounding increases are likely to cause disproportionately higher inconvenience. The assessment given in 4.5.1 suggesting the magnitude of the problem is minor is not correct. We accept, however, that a planned and ongoing construction noise management procedure is the only pragmatic means of control. The risk of cumulative noise effects should only influence approval conditions, not the approval itself.

## **Appendix E – 4.6 Extended work hours**

Section 4.6 discusses extended work hours. The discussion surrounding these extended hours is presenting, largely, assurances that benefits will ensue and few problems will arise. The Berry Alliance can appreciate that extending hours ought to be expected to shorten the construction impact duration, though this is not necessarily guaranteed.

The Berry Alliance would ask the Director General to consider that, if one or two property owners have expressed objection or concern, the fact that 35 have indicated agreement does not constitute justification. Those who have indicated agreement may not understand the impact until it is too late. Two critical issues affect this aspect – the Contractor will be the organisation actually controlling any approved activities and, critically, there has been no discussion in this document of the potential impacts from

haulage. An owner consent based on little or no information can not be considered an informed consent.

#### **Appendix E – 4.7 Out of hours work activities**

The following comments by the Berry Alliance should be noted:

- In preference to non-binding assurances that work of certain types will be restricted to certain areas, commitment to compliance with the DECCW criteria for “standard hours” should be included in the statement of commitments.
- Impact piling should be prohibited outside standard hours.
- The cooperative willingness of potentially affected residents to facilitate the construction progress should not be taken as an opportunity to reduce consideration of the adverse effects on those individual residents.
- The suggestion encouraged for a non-technical reader of 4.7.5 – that works not exceeding the noise management levels will be inaudible – is totally rejected. Noise that exceeds the background will be audible. Two of the stated situations (emergencies) are acceptable in any circumstance at all and are unnecessary statements, while the umbrella condition that noise from non-approved work will not exceed the management level does not appear sufficient justification for non-approved work to be permitted.

#### **Appendix E – 4.8 Construction road traffic noise**

This section neglects to consider the potential impact of concrete batching on truck movement generally and of sleep disturbance issues that may be associated with night-time noise events. This is totally unsatisfactory.

#### **Appendix E – 4.9 Construction Vibration**

This is a generally pragmatic approach with which we agree, subject to the comments made earlier in this report regarding planned monitoring at a range of distances.

#### **Appendix E – 4.10 Blasting**

Blast monitoring should be a mandatory requirement, as should compliance with the DECCW guidelines. The Director General should note that a failure to meet noise criteria is also likely to mean a failure to conform to blast overpressure limits. The impact of blast overpressure on lightweight buildings and on weaker elements such as windows should not be ignored. A strategy to move residents in anticipation of excessive noise would not be a sufficient control alone.

We do not agree that the increased values given in table 4-24 are justified by the statement that they comply with DIN4150, as the latter imposes more restrictive values on vibration below 50Hz. Higher limits may prove satisfactory where transmission paths are through rock, however where softer transmission materials or high water tables are concerned, low frequency vibration levels may be substantially higher.

#### **Appendix E – 4.11 Operational noise assessment**

Adjustment factors are mentioned in the modelling methodology section 4.11.1 without explaining what they mean. It is not clear how the sensitivity factor of 1dB(A) and the verifications factors of minus 1.7dB(A) and plus 0.5dB(A) are applied or what their aggregate significance is.

The traffic source strings described in 4.11.4 seem logical, but it is unclear whether trucks are modelled as three sources (tyres, engine, exhaust) or only two. If modelled as 3 sources then it is unclear what sound power division is applied.

Section 4.11.5 confirms that the modelling has used a correction of minus 4.3dB(A) for truck tyre noise. This is not inconsistent with table 3.1 of the RTA noise management manual<sup>7</sup>, but is inconsistent with their recommendation that the correction be no greater than minus 3dB(A).

We are not confident that the discussion and provisions made in modelling described in 4.11.6 will reflect that actual outcome of reflection from barriers. Land to the north of the bypass and north of the North Street barrier rises in elevation and is frequently affected by temperature inversion conditions. Trucks currently entering town from the south can be audible at distances of up to 3km. The Berry Alliance accepts that this is an area of considerable predictive uncertainty, however believes that cautionary approach should be taken with respect to potential sleep arousal and loud noise events, both of which will be aggravated by any reflection from barriers.

Noise model calibration has been described in 4.11.7. A number of comments seem warranted:

- Table 4-26 gives different values from the same subject reported earlier in Table 2-3. What do these mean?
- If rigorous modelling of the existing conditions has been conducted, would it not be desirable to present these findings as contour maps based on the current traffic flows? This would allow a far better validation of the modelling process than a number of spot outcomes based on input conditions about which the reader knows very little.

4.11.8 presents conclusions from the operational noise assessment. The objective of the RMS to minimise the number of receivers qualifying for treatment under the project funding, based on the classification of “acute” existing exposure levels, is recognised. It is our understanding that such receivers may be entitled to mitigation treatment but under a different funding stream<sup>8</sup>. However, the Berry Alliance believes there are opportunities for more efficient mitigation treatments, sympathetic with other regional objectives to preserve rural amenity, that are ignored if the treatment options are contemplated only after all possible adversely affected receivers have been eliminated.

The Berry Alliance asks the Director General to note that the outdoor lifestyle and amenity of residents, and visitors, to Berry can only be preserved by noise prevention measures implemented at planning stage. The NSW Road Noise Policy section “Environmental Criteria for Road Traffic Noise states its intention to “preserve amenity appropriate to land use” (page 5), however none of the stated criteria relate to noise affecting outdoor amenity. The rural amenity of Berry and its environs, a feature valued by residents and tourists alike, is not preserved by implementation of architectural treatments and double glazing. Many fear the loss of Berry’s attractive ‘outdoor’ culture due to increased traffic noise from the planned bypass, reflective of the experience cited by Sydney residents following implementation of the new parallel runway. Botany Bay residents reported a

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<sup>7</sup> RTA, “Environmental Noise Management Manual”, page 14.

<sup>8</sup> RTA, “Environmental Noise Management Manual”, page 52.

*“loss of incentive to pursuer outdoor activities” and that taking a walk “had become a stressful event rather than pleasant exercise”<sup>9</sup>.*

The predicted changes to noise levels in areas of non-residential land usage are given in 4.11.10. An exceedance is predicted for Mark Radium Park, as well as other areas, however the Park then appears to be ignored with respect to mitigation treatments.

The Berry Alliance disagrees with the statement made in section 4.11.11 that there is no requirement to meet noise criteria under adverse weather conditions. The Director General has clearly required information in order to understand the outcomes in these conditions. The information given in this section suggests values of the order of 5dB higher than those given in the report ought to be expected. This is a significant increase.

The findings of the discussion on maximum noise levels, and sleep arousal, given in 4.11.12 are not reliable. The data has been obtained by unmanned logger for which the sources affecting maximum noise levels are unknown. It may also be prudent to note that the logger numbers do not correlate with the locations given in table 2-1, hence the logger data may not be representative at all. The future maximum noise event levels will increase, contrary to the statements made in the EAR, as heavy trucks will be moving faster. Finally, the fact that the NSW Road Noise Policy and the RMS’ own planning manual do not provide requirements regarding maximum levels assessment does not alter the fact that the Director General has clearly requested it.

## **Appendix E – 5 Mitigation**

The discussions and guidance given regarding construction noise management, in part 5.1, all appear logical.

In relation to implementing “Reasonable” mitigation treatments, however, how can the proponent, or the Contractor if this responsibility is contractually delegated, *“reasonably make a judgement to determine whether the overall noise benefits outweigh the overall adverse social, economic and environmental effects, including the cost of the measure”<sup>10</sup>*? The interest of the impacted community is not adequately protected by this methodology. Previous comments have been made regarding the proposed mitigation measures that are reiterated within sections 5.1.2-4. In summary comment here the Berry Alliance seeks:

- Rigorous scrutiny of any proposals for work outside standard hours;
- An emphasis on good blast design to be included in controls on blasting, not simply that blasts be as coincident as possible;
- Planning to maximise nose-in/nose-out construction traffic movement. Proposing that construction traffic plan to reverse away from noise sensitive receivers as a mitigation treatment seems naïve;

Again previous comments have been made within this report in relation to the important operational noise mitigation proposals reiterated in section 5.2. Lack of repeat comment here does not indicate lack of concern or interest. Uppermost in the concerns of the Berry Alliance is the potential mis-use of the term “reasonable” in determining what mitigation treatments will actually be provided.

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<sup>9</sup> Report of the Senate Select Committee on Aircraft Noise in Sydney, “Falling on Deaf Ears”, 1995, page 107

<sup>10</sup> DECCW, “Road Noise Policy” 2011, page 20; DECCW, “Interim Construction Noise Guide, 2009”, page 4

### **5.7.3. EAR Section 7.3: Biodiversity**

#### **EAR Section 7.3: Flora and Fauna Habitats:**

##### **Existing Environment, Terrestrial Flora**

The following is a quote from a paper from University of Wollongong, Research on Line:

"The Illawarra supports the remnants of one of the five major areas of New South Wales rainforest growing at the time of European settlement and forms the southern distribution limit of many species of rainforest endemic flora.

Today, remaining rainforest associations are in little danger of further clearing for most occur in sites unsuitable for agriculture. Nevertheless, they are still subject to alteration by man, mainly by indiscriminate burning of bushland as bushfire prevention, but also by road construction, which opens closed rainforest, environments thereby exposing them to desiccation causing dieback of rainforest flora and weed invasion. Ref 'Rainforests of the Illawarra' J. Bywater University of Wollongong, 1980."

The remaining Rainforest is the Southern most limit for of the Subtropical Rainforest species of the East coast of Australia. This is a very sensitive forest area.

##### **Plant Communities:**

The Alignment of the proposed work is bounded by vegetation communities at a number of places. Most of these are fragmentary. The only community of any size and consistency is Illawarra Gully Wet Forest to the East of Tindalls Lane (CH13200 – CH13950). See Section 7.6, Fig 7-8 Vegetation Communities within the Study Areas. (EA Report Page 246)

Other Communities bounding the alignment are:

Warm Temperate Layered Forest at: Toolijooa Ridge (CH8450 – CH8700); Austral Park CH11650 – CH11800.

River Bank Forest at: all major creek crossings.

Illawarra Gully Wet Forest at: Mark Radium Park; Hitchcocks Lane; Schofields Lane. The Forest at Schofields Lane forms an important part of the visual landscape of the Western entry to Berry.

Table 7-49 Areas of each plant community potentially impacted by the project identifies 15.4 hectares of Illawarra Gully Wet Forest as highly impacted within the roadway and ancillary spaces and 10.05 as impacted due to edge effects. This is by far the largest disturbance of forest communities. (EA Report Page 259)

The EA Report makes no mention of mitigation measures to be taken concerning the disturbance of Illawarra Gully Wet Forest communities.

The Berry Alliance strongly recommends that DP&I request RMS to review the above comments and, at a minimum, prepare detailed mitigation measures for the above mentioned plant communities. In particular the following mitigation and management measures are proposed for the Berry Corridor:

Extensive replanting of Illawarra Gully wet Forest including large forest trees as well as under story species to match local native plants within the alignment and areas impacted due to edge effects. Local species are not common nursery stock. Their propagation in

numbers adequate for the mass planting required at the planting out of phase of the work will require preplanning of at least two or three years.

See notes on Corridors for definition of Berry Corridor.

### **Endangered Populations:**

#### **Western Forest Portal Entry to Berry**

Vegetation mapping (Appendix F – Figure 3.1.3 Map 3): This map shows an area of Illawarra Gully Wet Forest opposite to Graham Park at Schofields Lane (CH18950). Motorists approaching Berry from the West view this grove of mature Eucalyptus trees together with another matching belt on the other side of the Princes Highway. The grove on the Grahame Park side, although just as important as those opposite, has not been mapped. These trees are a significant feature of the entry into Berry and form a recognisable Portal Entry to the Town. It is noted that the unmapped grove partially sits in an Ancillary Area. This is a high Sensitive landscape feature. The Ancillary Area results in a High Impact category. Correction of this discrepancy in the EA Report requires a redefinition of the boundary of the Schofields Lane Ancillary Area so as to not include the area necessary to protect these trees. The existing trees should be enhanced by planting of new Eucalyptus trees within the alignment above the cutting at the ridge. The grove to the South side of the Highway, that could be affected if a cutting is required for a driveway to the residence adjacent to CH19000, should be protected.

### **Corridors:**

The Office of Environment and Heritage (OEH) web site <planning.nsw.gov.au/south-coast> “South Coast Regional Strategy” Map9 “Biodiversity and Coastal assets” shows the Berry Wildlife Corridor crossing the highway alignment between CH12200 (Austral Park) – CH13300 (Glenview). Catchment Management Authority Southern Rivers (CMASR) identify the corridor as crossing the alignment from CH11100 to CH13300. The draft Southern Rivers Catchment Action Plan (CAP 2023) is available for public comment. In the CAP 2023, Figure 25 Connectivity Priority Map shows a detailed map of the Berry Area. This classifies the area of the Berry Corridor at the new alignment as “Native Vegetation Corridor Actions – Revegetate”, (CAP 2023 Page 37).

The validation of the Wild Life Corridor by these Government Agencies has not been included in the “Wildlife Corridors within the Study Area” Figure 7.9 of the 7.3 Biodiversity portion of the report. (EA Report Page 250)

Figure 7.9 shows an unofficial corridor area linking Broughton Creek to Tindalls Lane at CH13950 – CH14250. This however does not coincide with existing forest, (see Appendix F Part 2b, Figure 3.1.9).

The Berry Alliance requests DP&I to ensure that RMS correct the identification of corridors and, in particular, that the area of forest from Austral Park to Tindalls Lane be considered as a separate Landscape Character sub Unit (Berry Corridor) and the remainder from Tindalls Lane to Broughton Mill Creek as Broughton Ridge sub unit (Broughton Ridge).

(RP 6.5) Berry Corridor Impact Assessment. Sensitivity (High) Impact (High to Medium) = Impact (High).

(RP 7) Berry Corridor Mitigation. Extensive replanting of Illawarra Gully wet Forest including large forest trees as well as under storey species to match local native plants within the alignment.



#### **5.7.4. EAR Section 7.4: Surface water and groundwater**

##### **Town Creek Park. (Appendix I Part 3b part 5.10.3 Figure 63)**

This new open space incorporates the remnant of the Town Creek which has been diverted on the Northern side of the alignment. The creek bed will consequently become dry. The planting in the existing bed in the area of the park is mainly weed species. The planting proposed in the EA Report for the park include Swamp Mahogany, Sandpaper fig and Broadleaf Paperbark trees. All of these are suitable for wet area planting. The flora and fauna from Town Creek Park down the full length of the creek to its junction with Broughton Mill Creek will be gravely affected. There will be high impact consequences.

Mitigation will require the introduction of water to the creek as high as possible in the course. This could be achieved by the introduction of an artificial water feature to Town Creek Park such as a fountain or a waterfall on the embankment to the South at CH17425.

##### **Mark Radium Park Duck Pond.**

The construction of the new alignment leaves a very small catchment area for this well used landscape feature in the Park. This results from the closure of the small feeder creek by the construction of the new alignment. The rain water that falls in the catchment area will now require treatment via the settlement ponds for removal of the pollutants it has picked up from the road. These are below the pond and some distance away. Water from these settlement ponds will not be channelled to the duck pond as presently occurs and will, instead, be directed to the Arbour Creek. Reduced water input to the duck pond will result in the destruction of its flora and fauna.

The introduction of a water feature such as a water spout to top up the pond is essential to keep it filled and aerated.

#### **5.7.5. EAR Section 7.5: Flooding**

The area of 1 in 100 flooding is shown in Figure 7.15 - 100 year floor extent. (Page 308). This also shows the ancillary areas. Sites D,E,J and L coincide with areas identified as 1 in 100 flood prone.

##### **Ancillary facilities.**

The E.A. Report considers the issue of Ancillary facilities (Page 105). "A number of potential ancillary facility site locations have been selected, as illustrated in Figure 4-20 based on the criteria listed in Table 4-10." (EA Report Page 105).

Table 4-10 Selection criteria for ancillary facility sites. These sites are identified 'A to L. The site identified on Figure 8.3 as E is an area identified in Figure 7-18 Broughton Creek over bank flow paths within the project as subject to Flow path 5 year flood event and above.

This is not in concurrence with the requirements for Ancillary Facilities.

"Wherever possible, sites are to be located above the 1 in 100 year flood level. If sites cannot be located above the 1 in 100 year flood level, they could be located above the 1 in 20 year flood level subject to the implementation of appropriate mitigation measures to reduce flood risk and impacts on the surrounding environment" (EA Report Page 106)

Site E should not be classified as an Ancillary Facility.

## **5.7.6. EAR Section 7.6: Landscape character and visual amenity**

### **1 Cultural Landscape Context:**

The following were acknowledged as the Government Agencies authorising the defined Cultural Landscapes.

#### **(Appendix I - Table 5.1 Page 36)**

1. Berry-Bolong – Pastoral Landscape: Shoalhaven City Council Heritage Study.
2. Berry District Landscape Conservation Area: National Trust of N.S.W.
3. Berry Township Urban Conservation Area (BTUCA): Shoalhaven City Council Heritage Study and National Trust Register 2011.

The importance of the Coastal Landscape in the culture of Berry and its surrounds is confirmed by these Classifications. This increases the sensitivity of impact on all Landscape issues.

### **2 Landscape Character Units:**

The EA Report is organised as follows:

1. Toolijooa Ridge
2. Broughton Creek
3. North Berry
4. Berry
  - 4.1 Bridge
  - 4.2 North Street
  - 4.3 Kangaroo Valley Interchange (including Mark Radium Park and the Highway to Schofields Lane.)

#### **(Appendix I – Part 5.5 – Figure 5.9 and 5.10 Page 40)**

### **3 Landscape Sensitive and Visual Impact assessment:**

#### **Toolijooa Ridge (Appendix I – Part 6.3 Page 46).**

**View studies.** The two view studies done are 1- From North on Princes Highway to South 2- From South on Broughton Creek to North. The Report does not give sufficient credence to view of cutting from East. This should be considered from: 1- As a passenger on the Train. 2 - A motorist on Tourist Road between Gerringong and Gerroa. These are famous views of the highly rated Illawarra Coastal Plain and Foothills and an important tourist attraction to the South Coast.

#### **Toolijooa Ridge Impact Assessment.**

This affects the nominated Impact Assessment. The sensitivity should be increased from moderate to High Impact.

1. E A Report: - Sensitivity (Moderate) - Impact (Moderate) = Moderate.
2. Recommended : - Sensitivity (High to Mod.) - Impact (High) = High Impact.

#### **Toolijooa Ridge Mitigation.**

Views from railway line and Tourist Road reveal a large 25 metre deep cutting in the Toolijooa Ridge line in front of the Illawarra escarpment.

This can be mitigated by screening with large tree planting. This is possible with in the alignment on the embankment to south at CH7700-CH7950. Additional Screen planting is necessary. These should be large trees in natural grade land above the cutting to South at

CH7950 to ridge line CH8800. Also on the shelf to cutting to North West at CH6800 – CH8900. This mature canopy will re-establish the profile of the Toolijooa Ridge.

### **North Berry. (Appendix I – Part 6.5 Page 50).**

#### **Berry Wildlife Corridor.**

The Department of the Environment and Planning's <[planning.nsw.gov.au/south-coast](http://planning.nsw.gov.au/south-coast)> "South Coast Regional Strategy" Map9 "Biodiversity and Coastal assets" shows the Berry Wildlife Corridor crosses the highway alignment between CH12200 (Austral Park) – CH13300 (Glenview).

The Southern Rivers CMA Corridors identify the corridor as crossing the alignment from CH11100 to CH13300.

These Agencies' validation of the Wild Life Corridor has not been included in the "Wildlife Corridors within the Study Area" (Chapter 7 - Section 7.3 - Biodiversity - Wildlife corridors -Figure 7.9 - Page250).

Figure 7.9 shows an unofficial area linking Broughton Creek to Tindalls Lane at CH13950 – CH14250. This however does not coincide with existing forest, (see Appendix F Part 2b - Terrestrial Flora and Fauna - Fig3.1.9). This is a serious omission of a significant environmental classification of the Landscape in the area of the Alignment.

#### **North Berry Landscape sub - character units.**

This section of the alignment would be better identified as 2 separately identified Landscape Character Units. Vegetation Mapping in Flora and Fauna (Appendix F part 2b Map 9 - Figure 3.1.9) shows extensive Illawarra Gully Wet Forest in the middle section of the alignment CH13000 (Glenview) – CH 13950 (Tindalls Lane). This is the only forest area on the entire alignment.

The area of forest from Austral Park to Tindalls Lane needs to be considered as a separate Landscape Character sub Unit (Berry Corridor) and the remainder from Tindalls Lane to Broughton Mill Creek as Broughton Ridge Landscape sub - character unit.

#### **Visual impact assessment North Berry**

Berry Corridor Impact. Recommended Assessment: Sensitivity (High) Impact (High to Medium) = Impact (High).

Berry Corridor Recommended Mitigation: Extensive replanting of Illawarra Gully Wet Forest including large forest trees as well as under story species to match local native plants within the alignment.

Broughton Ridge Impact: Recommended Assessment: Sensitivity and Impact remain as per EA Report (High to Moderate Impact).

#### **Project Components: Permanent Ancillary Site.**

This list should include the Permanent Ancillary Site at CH14300 – CH14550.  
Broughton Ridge Mitigation: Flora screening to border adjacent to Permanent Ancillary Site in Local Native plants to highway and Tindalls Lane off ramp road.

## **Project Component: Alexander and David Berry Memorial Sculpture**

Inadequately addressed in the EA Report. The repositioned Alexander and David Berry Memorial Sculpture should be listed as a Project Component. The position as shown does not reveal the art work as intended and as realised at the existing location. The repositioning of this Memorial should be the subject of consultation between the artist, Shoalhaven Council, the interested parties in the Berry community and the RMS.

### **Berry (North Street):**

**Noise Attenuation Barrier Options.** (Appendix I Part 3b – 5.9 Urban Design Elements Page 51). The Visual Impact of the Sound Attenuation Wall must be assessed in terms of its impact to the Berry community as well as the road users on the highway. The visual impact of the wall from the highway will be a defining feature of Berry for motorists passing by the town. There are many examples of sound attenuating walls in NSW built by the RMS. Many suffer from over design and others are just monolithic slabs lacking the appropriate scale and interest. The alternate solutions shown in the EA report have been shown in section only, suggesting no change in profile for the full length (CH16300 to CH17600.) While the mitigation measures (softening of visual impact with planting and mounding) are somewhat successful they fail to address the straight line form of the wall in the natural landscape. The human eye will seek out the straight line of the continuity of the top of the wall in spite of planting and mounding. The wall must fulfil its sound attenuation function but it must not be a dominant element from either side. Some variation of form is necessary.

Professional Landscape Designers have fulfilled this brief for many sound barriers beside the highways of NSW. A skilled professional designer should be commissioned for this work.

**Town Creek Park.** (Appendix I Part 3b – 5.10 3 –Town Creek Park and Queen Street Link Page 59).

This new open space incorporates the remnant of the Town Creek which has been diverted on the Northern side of the alignment. The creek bed will consequently become dry. The planting in the existing bed in the area of the park is mainly weed species. The planting proposed in the EA Report for the park include Swamp Mahogany, Sandpaper fig and Broadleaf Paperbark trees. All of these are suitable for wet area planting and will not succeed in a dry bed. The flora and fauna from Town Creek Park down the full length of the creek to its junction with Broughton Mill Creek will be gravely affected. There will be high impact consequences. Mitigation will require the introduction of water to the creek as high as possible in the course. This could be mitigated by the introduction of an artificial water feature to Town Creek Park such as a fountain or a waterfall on the embankment to the South at CH17425.

**Huntingdale Park Sound Attenuating Wall.** (Appendix E, Sub Appendix L –Noise Protection Barrier Locations).

The wall at Huntingdale Park is on the North side of the alignment at approximate CH17750 – CH17950. The wall is 4 metres high and is free standing. As for the North Street Sound attenuation Wall the Huntingdale Park Wall is a defining feature of the Berry Area for motorists passing by Berry. It is not set against the surrounding landscape and is viewed mainly from the highway. Behind this wall is another wall. Both of the two noise attenuation walls will influence the decision of motorists to visit Berry. The exit ramps to

Berry immediately follow the walls. They are highly sensitive components of the design and need to reflect the character and heritage of the town. A skilled professional designer should be commissioned for this work.

### **South Western Forest Portal Entry to Berry.**

Vegetation Mapping (Appendix F - Figure 3.1.3 Map3.) This map shows an area of Illawarra Gully Wet Forest opposite to Graham Park at Schofields Lane (CH18950.) Motorists approaching Berry from the West view this grove of mature Eucalyptus trees together with another matching belt on the other side of the Princes Highway. The grove on the Graham Park side, although just as important as those opposite, has not been mapped. They are a significant feature and form a recognisable portal entry to the town. It is noted that the unmapped grove partially sits in an Ancillary Area. This is a high Sensitive landscape feature. The Ancillary Area results in a High Impact category. The grove to the south side of the Highway could be affected by the cutting required for the driveway to the residence adjacent to CH19000.

Mitigation for this discrepancy in the EA Report requires a redefinition of the boundary of the Schofield Lane Ancillary area so as not to include the trees and the classification of the northern grove as significant. The existing trees should be added to by planting of new Eucalyptus trees within the alignment above the cutting at the ridge.

## 5.7.7. EAR Section 7.7: Aboriginal cultural heritage (incl Appendix J)

### With respect to sites:

- G2B A13 The ‘Little Mountain’ or Dicky Wood’s Battle Ground  
“The actual size and location of the battleground remains unknown, however 1.7 km of the CF passes through an area within which the battle ground is likely to have been situated”. (Table 10.1 Appendix J).
- G2B A14 The Historical Encampments at Broughton Village, ‘Brookside’ Aboriginal Encampment.  
“The actual size and location of the encampment is unknown, however 0.4 km of the CF passes through an area within which the encampment is likely to have been situated”. (Table 10.1 Appendix J)
- TRACL Toolijooa Ridge Aboriginal Cultural Landscape  
Approx 1.4 Km of the project would traverse its upper slopes. (Table 10.1, Appendix J.). A ceremonial stone arrangement and bora ring are associated with the ridge.

According to the Statement of commitments, these three sites, despite being of great importance to the local aboriginal community are to be excavated according to the Unexpected Finds Procedure. As will be shown below, due to their importance to the local aboriginal people, the high significance of the finds in the test pits dug in the areas (G2B A29, G2B A30, G2B A31 and G2B A36) and the fact that, if the part of the each site affected by the infrastructure happens to be the part that contains the battle ground, prehistoric campsite or bora ring, then artefacts will be salvaged and the site recorded but the site will be lost for ever. The actual site is important not just the artefacts retrieved.

The Environmental Assessment (EA) Report has said it is too hard to excavate the whole of these sites and in 7.7.3 ‘Assessment of Potential Impacts’ the report says that: *“The potential avoidance of the above sites by the realignment of the preferred project route would be counterproductive, given that in most cases the identified archaeological deposits extend either side of the construction footprint. A shifted alignment would simply impact the same archaeological resource within an adjacent area.”* That is fair but we are asking for the parts where it is anticipated the infrastructure will go are excavated early enough before construction to be able to save these sites. With temporary sites, being covered with road base so the natural soil profile is not disturbed should be adequate.

The EA report recognises the importance of these sites for Aboriginal people, the limited test excavations and the potential for significant finds as follows:

1. The potential for burials being associated with the battleground site;
2. Ceremonial grounds (a stone arrangement and bora ring – Appendix J 4.4.4) are associated with Toolijooa Ridge;
3. In Appendix J, 4.4.1. The encampment, G2B A14, has had artefacts collected that suggest it was also occupied in prehistory. Burials can also be associated with encampments (Appendix J page 58) and page 59 says that on the NSW south Coast ceremonial sites are more commonly identified from oral history or document.

In Appendix J, 8.2 ‘Aboriginal cultural values in the project area’ the EA report says *“these places were considered to have significance due to their importance in traditional lore, as evidence of past occupation patterns, their association with lives and memories of people’s ancestors, and their historical importance.”* Also the test sites G2B A29, G2B

A30 and G2B A31 *"are identified as having moderate to high significance within a local context based on their potential association with the Brookside Aboriginal Encampment and "Dicky Wood's Meadow" battleground."* These three sites display higher artefact incidence (30 & 31) or higher than average assemblage richness (29). This combination gives a moderate to high scientific research value.

They appear from what is written in the report to be especially important to the Aboriginal Community in particular the Battleground and the Ridge as is stated in 7.7.3 page 373: *"At the AFG held on 21 November 2011, a resolution was made relating to minimising damage as much as possible to Toolijooa Ridge and Dicky Wood's Meadow"*, and that these places should be protected at all costs. On page 383 the report says *"This ethnographically recorded traditional battle ground is a rare site type"*.

In App J, 11.1.1, the EA report admits that inadequate archaeological investigation has been carried out on these sites: *"further archaeological investigation in the form of salvage excavation is considered to be prudent prior to commencement of construction impacts at these sites"*. This will be done by the Unexpected Finds Procedure. In Appendix J, Appendix M, 'Unexpected finds Procedure', 2 "Scope" the EA report says that this procedure assumes that an appropriate level of Aboriginal and Non Aboriginal cultural heritage assessment has been undertaken prior to project approval or determination. Such assessment would have identified all heritage items, including areas of archaeological potential, likely to be present within the project area. However, in some cases, despite appropriate and adequate investigation, unexpected archaeological finds may be encountered during construction phase. This means that the excavation will be carried out as the road is being built. This will preserve only the artefacts, not the site.

The report admits that the EA report also admits that under 'Representative and Worst Case Impact Scenarios' page 381 the potential examples include ones which are likely to occur at the above sites which the report says have been given limited test excavations. They fit into the examples given in Appendix J, 10.1, 'Representative and worst case impact', page 123. They are all capable of being or producing, according to the information in this report: *"unique or rare site"* (Toolijooa Ridge); *"evidence of mid to early Holocene and/or Pleistocene occupation"* (The campsite); *"a burial ground"* (the battleground). Thus we know ahead that these sites are very important, enough to be *"Representative and worst Case Impact Scenarios"*, and therefore we are in a position to excavate early enough to avoid those sites if they are in fact impacted. This is necessary as the sites are important not just the artefacts.

The Table 7.60 the EA report says for the Battleground and the Encampment sites that: *"Disturbance to the natural soil profile would be minimised by raising the elevation of the proposed carriageway on imported fill. Where practicable, the removal of top soil would be avoided or minimised prior to the placement of fill."* This means that the sites, if under the road will be covered for ever and compacted.

### **With respect to all Aboriginal Sites**

In 7.7.3 under 'Impacts resulting from ancillary construction facilities the EA report says that *"The exact location, configuration and scope of the impacts within the construction ancillary facility sites is unknown at the current stage of the project planning."* Further on it says *"Where and if necessary, a delayed and focused pre-construction testing program would be conducted, once areas of planned and unavoidable impact have been defined."*

In Appendix J, 11.1.2, the report says *"Stakeholders have expressed a strong opinion that the cultural values inherent in artefacts which remain on-site, (after the completion of any*

*required archaeological salvage excavations), and which would be directly impacted by construction, should still be effectively managed. The stakeholders have consistently proposed that this be achieved by the monitoring of construction works by qualified Aboriginal Sites officers.”* Then later in the same section the RMS made the following acknowledgement/undertaking: *“RMS proposes to undertake a strategic salvage program across all areas with moderate to high significance that would be impacted by the project.”* Given that a salvage operation would be employed prior to construction the request to undertake monitoring during construction is not supported by RMS. As this is going to be done and as these sites fall into that category we ask that it is done early enough to be able to preserve the sites by avoiding them if they are found to be in the path of the new infrastructure.



## 5.7.8. EAR Section 7.8: Non-Aboriginal (historic) heritage (incl Appendix K)

### A. With Reference to Item G2B H11 (Glendevan House, 77 or 79 North Street Berry)

This is assessed in this report as having heritage significance within a local context. In Table 7.62: its Recording is "Federation cottage c. 1894"; its description is "*Federation house with a number of additions*"; Context of significance is local; its significance criterion is 'g'; and summary statement of significance is "*The Glendevan house is of local significance as a representative example of Federation period housing on the Berry Estate*".

The impact on this house, given in Table 7-63, is complete direct impact which is to result in its physical loss.

In 7.8.4 'Environmental management measures' in Table 7-64 the report gives details of the archival recording etc. to be done before demolition and that RMS will seek and let someone take the house to another location to preserve it. However they will not pay for the removal or do it themselves and will demolish the house if no one takes it.

However this house is much more significant than this report states. It is listed on the State heritage Register in the Shoalhaven Heritage Inventory (SHI 2390150, Study Number BO93).

Further research has been done by Berry and District Historical Society Inc. to establish the significance of this property and that history is included. It is also believed that it has its original dairy but further research is needed to establish this and we are unable to gain access. The RMS have apparently done an architectural report on the house. The property is shown on the 1893 Ewings map.

The cottage was originally built in the 1870s with an addition made in the Federation era and as such is equivalent in age to the earliest houses built in the town which are listed on the State Heritage Register in the Pulman Street Heritage Conservation Area. It is also in a much more original state than one of the most historically significant houses in that precinct, namely Pulman's Cottage, with the two parts of its history (1870s and federation) clearly seen and in original state.

In the analysis against significance criteria for this property in Appendix K, Appendix I it is rated as having local significance against criterion (g). In light of the information below it should be rated as having local significance against more of the criteria.

We feel this cottage is significant for its history, for the originality of its structure, for its association with significant townsfolk, and possibly the intactness of its outbuildings and property boundaries. It is also one of the oldest houses in town and there are few intact and in original state from that era. As such it should not be demolished and the mitigation strategies in the report are not enough to ensure this. We dispute the statement in Appendix K, Appendix I that "*a northern and/or more eastern alternative would exclude the use of the North street corridor and cause significant property severance*" as RMS have moved the road out of the North street corridor in a great deal of its length in order to move the road to the north of the sporting fields in one area and further away from North Street in another (both to ameliorate problems identified by town members).

## **The History of 77-79 North Street, "GLENDEVON"**

A farmhouse built c.1870 and added to by a subsequent owner.

The first house was a farm cottage built around the 1870s and occupied by the Milligans. The first occupants were James and Catherine Milligan (nee Milligan) who were some of the early pioneers of the district. They arrived in Broughton Creek from Kangaroo Valley in the early 1870's (Obit. Rebecca Milligan. South Coast Register, September 16th 1945). James Milligan died in 1878 and Mrs. Milligan ran the small dairy farm until 1903. Catherine Milligan, in the 1885 Police census, is listed as being at Broughton Creek and having 33 acres, 1 horse, 23 cattle and 11 pigs.

The Milligans had 4 children, Mary A. 1864 (died 1864), Rebecca J. B.1866, Sydney, B. 1871 and James, B.1875. In 1898 Catherine and son James were milking 14 cows, had a clean dairy which employed 2 people (Berry Dairy Register, 1898-1903). She had 28 ¼ acres, 5ft x 8ft can room and a cart. She was also a milliner. Her daughter was also a milliner and was a tenant in town in 1893. Catherine died in 1911 in Lilyvale and was buried in the old Berry cemetery.

After Mrs. Milligan's 7 year lease was up in 1903 the property was sold to Cecil Lacey Dawson (c.1904); he was paying land tax on it in 1905.

Cecil Dawson was a medical practitioner who was a tenant of the house next door to the Great Southern Hotel in Queen Street, Berry. He died in 1907 of Influenza which had been raging in the district for a while; his infant son had died from the same cause. Dr Dawson was buried in the Berry Cemetery. His wife Mabel Dawson, kept Guernsey cattle imported from the island of Guernsey, (Gus Miller, reminiscences' 2009 ) on the farm in North Street. She was one of the first in NSW to do so. These cattle won prizes at the Berry show (Shoalhaven Telegraph Feb 20th 1907). Cecil Dawson also had a prize winning black coaching horse. We think Mabel extended the house as it is now by adding the Federation section.

Mabel Dawson paid out the mortgage to the Berry Estate in 1908. In 1913 she left for a stay of three years in England and in 1916 went to live in Sydney (Nowra Leader, March 31st 1916).

It is likely that Mabel Dawson sold the property to William Shute who was at that address in 1924. Shute farmed the land but by the time he sold it he had a person called Ware farming it.

Henry Arthur Ware worked for the Wiley family at Meroo Meadow. In 1907 he married Elizabeth May Wiley – the daughter of James and Mary – and they went north to Murwillumbah/Byron Bay where most or all of their children were born. They returned to this area and farmed for a while at Meroo until, in 1920, they leased the North Street farm from Mr. Shute. In 1929 their daughter Mavis married Eric Jamieson whose family had the bakery in Queen Street. A daughter Millie went to Nowra High School and another daughter worked at Mannell's shop. The above information about the Wares was given by Murray Jamieson, the son of Mavis and Eric, who obtained it from his 92 year old Aunt Joyce, the last remaining member of her generation. She and her brother Arthur attended Berry Public School. She could not remember much about the house except that there was a well in the back yard. The Ware family moved to Helensburgh where Henry ran the picture show before finally moving to Picton.

William Shute then sold the farm to George Miller who leased the house to various tenants including Bill Peck, Roy May and Sid Gray but farmed the land along with the small farm next door which he had bought after he came back from the first World War.

George Miller sold the house to the Bellings (who was a prisoner of war in the second world war) who sold it to Judith Gardner. In the 1950s the house was rented by Dr John Roche and his wife Kathy. He was in partnership with Dr MacIndoe in the Alexandra Street practice. The family now live in Moss Vale. It was bought by The RTA in the 1980's

## **B. With reference to G2B H48 and G2B H54**

We support the RMS statement in 10.9 of the Appendix K to avoid direct impacts on these two features by positioning of the ancillary structures.

## **C. In 7.8.3 Assessment of Potential Impacts:**

Under subheading 'Project aspects which respect or enhance the cultural landscape values' the following statement is made: *"The construction of a bypass of Berry avoids the need to widen and transform one of the town grid streets to accommodate the highway traffic. If the latter option was adopted it would irrevocably change the amenity and heritage character of the town, and require the full or partial demolition of many properties with heritage value."*

This statement is saying that there is no other option than the current proposal or the option given above. This is incorrect and represents a serious misrepresentation of the ongoing debate relating to what many in the community believe was a seriously flawed route options selection process. The community was shown many different options, at least one of which (the southern option) was preferred by the majority of town and was assessed by town workshops organised by the RTA (now RMS) as having virtually no community impacts. It was dismissed by the RMS solely on the basis of being too costly without any comparison of environmental or community impacts being made.

## **The Southern Illawarra Coastal Plane and Hinterland Cultural Landscape.**

The RMS acknowledges the significance of the Southern Illawarra Coastal Plane and Hinterland Cultural Landscape to the identity of Berry. The SICPH CL meets ALL the significance criteria of the project. The Summary Statement of Significance admits that:

*"The Southern SICPH CL is of local significance"; "it is of local and State significance in terms of its aesthetic qualities" AND; "it is a rare landscape type, both in terms of its natural features and also the retention of such clear examples of the late nineteenth and early twentieth century pastoral landscape and associated private towns"*

The EAR identifies serious impacts on the SICPH CL which, without mitigation,

*"would amount to a significant deterioration in the cultural landscape values of the SICPH CL and specifically to the Berry landscape setting."*

Mitigation strategies focus on reducing visual impacts from the town viewed to the north and north-west. However, these strategies ignore the fact that people in Berry value other perspectives. The large concrete interchange at Kangaroo Valley Rd will dwarf and divide the town. The Berry Alliance asserts that the EAR fails to address the issue of severance.

### **5.7.9. EAR Section 7.9: Land use and property**

Appendix L of the EA Report lists properties adjacent to the alignment affected by the project. Some of these properties have sections isolated from their major part that are left as remnant isolated segments. These in some cases are not viable as useable land. Some are cut off by the works or they are so small as to not be viable pastoral properties. They are large enough to be a source of weed growth with the risk of being seed sources to the surrounding area. Most have been acquired by RMS but will possibly not remain in that Departments ownership after commissioning. Strategies listed in Table L1 concern the division of the properties but not the small isolated segments.

The following property shown as Lot Numbers in Appendix L Table L-1 and Figures L-1 and L2 are considered to be affected.

**Lot 7** - CH9700 – Ch 9900. North West corner - The bridge abutment meets the Princes Highway and isolates a triangle of land from the rest of the Lot. This is accessible from the Princes Highway but is too small to be viable.

**Lot 11** - CH11500 – CH11650. Segment between existing Princes Highway and South Bound Austral Park on ramp is completely isolated.

**Lots 14-15** - CH11550 – CH12200. Segment between new alignment and Austral Park South bound on ramp is completely isolated.

**Lot 22** - CH13850 – CH14250. Segment between the new alignment and Tindalls Lane off – on ramp is completely isolated

**Lots 31 and 38** - CH15550 – CH15700. Segment between alignment and North bound on ramp to the bridge abutment is completely isolated.

**Lot 38** - CH15700. Segment between junction of on – off ramps is completely isolated.

**Lots 40, 42, 43 and 49** – CH16500 – CH17200. Segments between new alignment and North Street have been isolated from the original farms. This isolation means that a reasonable sized area of viable pastoral land is now included in the urban area of Berry. This has special significance to the residents of North Street.

**Lot 54** – CH17350 – CH17550. Segment between the new alignment and George Street. This Triangle of rural land with Town Creek water course is now isolated from any rural connection. This has special significance to the local residence.

**Lot 76** – CH17700 – CH17800. Segment between new alignment and Huntingdale Park Road is isolated.

Most of these areas are owned by the RMS and will be revegetated with endemic flora species. The areas in the Berry urban area are not guaranteed to become Council Land. Those out of the Berry urban area will require continuing maintenance. The RMS has indicated that no long term maintenance will be undertaken for these Lots. They will become weed infested and the source of infestation to local rural areas.

We request that DP&I require RMS to identify the properties where remnant isolated pockets result from the work and provide strategies for the on-going maintenance of all affected lots along the alignment that are not able to be sold or assigned.

## **5.7.10. EAR Section 7.10 Socio-economic impacts**

### **EAR 7.10.2 Existing environment**

*“The lifestyle forged by the physical characteristics and community facilities have made the region an attractive place to live and this lifestyle is highly valued by the local community.”*

The Berry Alliance questions why the RMS, which identifies clearly why Berry is so highly valued by its “locals”, “treechangers” and tourists, proposes to threaten this lifestyle by severing North Street and locating the southern interchange in the middle of the town.

### **EAR 7.1.3 Public transport, pedestrians and cyclists p. 203**

North Street is a popular and peaceful pedestrian and cycling area. RMS proposes to sever the street and to put a foot/cycle path along the south side of the bypass to Queen St. Cyclists and pedestrians, when arriving at the Kangaroo Valley Road junction with Queen Street, will be faced with the obstacle of two roundabouts either side of a bridge if they wish to continue along the path. The safety of cyclists and pedestrians will clearly be compromised. For this reason the RMS proposed mitigation measure is not acceptable.

### **EAR 7.1.4 Potential Impacts – Operational**

Monitoring after construction is completed for *“lack of safe access for pedestrians and cyclists at the southern interchange”* is not good enough. Roundabouts consisting of a number of roads to be crossed with traffic approaching from different directions cannot be made safer after they are built. Even with pedestrian refuges, the roads still have to be crossed.

The suggested measures do not mitigate these problems caused by the preferred northern option. We call on the RMS to establish a working group including external experts and community members to review options to manage or avoid the negative impacts of the severance of North Street and the planned siting of the southern interchange. Ideally this working group would work under the auspices of the Community Review Group as this approach was successful in resolving design concerns relating to the Berry Bridge.

The Berry Alliance believes that siting of the interchange to the south of town, with the associated removal of the roundabouts and northern off ramp from the town centre, would help improve cohesion by reducing physical and visual impact and would keep pedestrians and cyclists safer. Replacement of the Kangaroo Valley Rd bridge with a pair of Bebo arches (cut and cover) would detract less from the town’s amenity. RMS arguments that the town needs to be visible for motorists to decide to leave the highway and visit the town which were used to justify the current siting of the interchange are invalid. Their research on other successfully bypassed towns such as Berrima prove this.

The concerns discussed above all result from the RMS determination to select a northern route as their preferred option.

### **Amenity impacts p.462**

The Berry Alliance challenges the following justification for the proposed northern bypass:

*“The North Street corridor has been previously gazetted as a road corridor and there*

*has been community awareness and expectation that the highway would be relocated along this corridor. One of the key factors in selecting this option was to avoid the potential impacts on the Pulman Street heritage precinct that would have resulted from construction of other route options. “*

Proposals from the 60's and 70's to move traffic volume from Queen St to North St were indeed well known to the community at that time. Berry had not yet experienced significant expansion off Kangaroo Valley Road and it was just beginning to undergo the transformation from agricultural village to tourist destination. What the community expected was a simple deviation of through traffic along a slightly upgraded North St. To suggest that the major highway upgrade now proposed five decades later in any way resembles earlier proposals is ludicrous. To state also that no other option avoided the heritage Pulman St precinct ignores the community generated southern option put to the RMS in December 2011.

## **Volume 2 Appendix M Technical paper**

The discussion in the EAR of the socio-economic impacts of the proposed northern bypass fails to demonstrate the ability of the project to meet the following objectives:

- *Enhance potential beneficial environmental effects and manage potential adverse environmental impacts.*
- *Optimise the benefits and minimize adverse impacts on the local social environment.*

It also completely fails to meet the RMS Urban Design Objective 4:

- *“Respect the communities and towns along the highway*
  - *Minimise the impact of the project on the amenity of Berry residents. “*

Although the positive impact of the removal of highway traffic from the main street is indisputable, the concluding statement of the Executive Summary is glib and ignores the negative impact of the project on Berry and its community:

*“On balance, it is considered that the overall impact of the project would be positive for the region”,*

In fact, the amenity of Berry as a whole is not mentioned in this report. Comments are concentrated on Queen St, North St, the Kangaroo Valley overpass and Huntingdale Park. It seems that once the historical and existing context of Berry have been defined in Section 2 of Appendix M, including in particular Community values, pp10-11, these cease to be of importance. The gap between what the RMS intends to change, expecting residents to accept and live with it; and what the community actually values and wants retained is enormous.

## **M Section 3: Review of case studies of town bypasses**

The Berry Alliance feels that comparison to towns such as Berrima, Yass, Karuah and Goulburn are not valid. Each of these towns has a bypass with, at most times, no visual contact with the town. Improved quality of life and environmental amenity can not be presumed for Berry when the highway upgrade actually bisects rather than bypasses the town. RMS is well aware that the attraction of Berry for both residents and tourists is its historic, rural character and its scenic beauty. Any structure that is imposed on this detracts from the town as a whole.

## **M Section 4: What were key issues affecting these towns?**

*“Being able to see the town from the bypass is not necessarily a critical factor in determining the ongoing viability of the bypassed town. For example, Berrima and Goulburn have flourished post bypass. “*

Why then did the RMS use importance of the visibility of the town as a reason for eliminating southern bypass options, particularly that proposed in December 2011 by the community?

## **M Section 5: Assessment of impact**

The Berry Alliance requests the DP&I to question why the following definition of amenity given in 5.1.1 of the Appendix, under Construction Phase impacts, was not used to guide decisions made by RMS when selecting a preferred route and concept designs:

*“Amenity refers to the quality of a place, its appearance, feel and sound, and the way its community experiences the place. Aesthetic qualities are an important part of amenity, but the broader concept of amenity is determined also by the physical design of a place and the human activity that takes place within it. A place that has ‘amenity’ is regarded as pleasant and attractive, as well as convenient and comfortable.*

*Amenity impacts include any factors that affect the ability of a resident, visitor or business owner to enjoy their home and daily activities, for example, noise, vibration detrimental changes to views or changes to air quality.”*

Amenity for the RMS extends no further than Queen St between Prince Alfred and Albany Streets. Any route selected would have achieved improved amenity for this shopping area. The preferred northern route impacts heavily on the amenity of the rest of the town.

## **M Part 5.1.2: Community cohesion and severance**

This is another area of high concern for the Berry Alliance. To quote from the EAR Appendix:

*“In a cohesive community, residents have a sense of belonging and feel a strong attachment to the community and their neighbours.....*

*Community severance occurs when people are separated from the facilities, services and social networks they wish to use within their community. **This can be due to modified travel patterns or psychological barriers created by transport infrastructure eg highways or bridges, and can manifest in outcomes such as trip delays, diversions and traffic noise. Severance also arises where there are changes in the comfort and the attractiveness of areas.....***

*Existing physical connections and linkages in the study area, and particularly within Berry, are instrumental in shaping current community cohesion. Existing paths of travel by vehicle, bicycle and foot are seen by the local community as critical to maintaining this current community cohesion, which also contributes to the community character of the town. There are currently two road accesses from west Berry to Berry: via North Street and via the Kangaroo Valley Road/Queen Street intersection. Access to existing community infrastructure (educational facilities, health services, places of worship, etc) is also seen as fundamental to creating and maintaining a sense of community*

*cohesion and wellbeing. “*

The Berry Alliance requests that the DP&I ask the RMS to explain how the removal of highway traffic from the main street can be used to justify the knowing removal of the important links in other areas that create community cohesion in Berry. A highway with a greatly increased volume of traffic will cut across the town, one bridge will be the only link to what will be the larger half of town and to the Southern Highlands beyond that. All facilities and services will lie across the other side of that bridge. A quiet rural street greatly enjoyed by residents, pedestrians and cyclists will be severed and escarpment views will be stolen forever for the enjoyment of motorists as they speed through Berry.

## **M Part 5.2: Operational phase impacts**

### **M Part 5.2.1: Amenity impacts**

Once again improved amenity in Queen St is used to generalize about improved amenity and lifestyle quality for the residents of Berry. Concerns about loss of views, increased noise and the physical impact of the project on the town are reduced to consideration of mitigation measures for residents of North Street and Huntingdale Park. The impact on lifestyle for all residents of Berry is not considered in this section. No other residential area in the RMS so-called “West Berry” is mentioned. There is no recognition by the RMS that all areas of Berry are valued and used by all residents.

The loss of amenity for residents of George, Edward, Albany and Alexandra streets with the proposed closure of Victoria Street is briefly considered. Relying on calculations now shown to be incorrect, increases in traffic volume and noise have already been dismissed in other areas of the study as “acceptable”. The true picture is that, for George Street in particular, the change to amenity will be highly unacceptable.

### **M Part 5.2.2: Community cohesion and severance**

*“The project has the potential to impact community cohesion in both positive and negative ways. In a positive way, it has the ability to bring communities closer together through removal of physical barriers to movement in some locations although in other locations it may interrupt access to facilities and the ability of individuals or groups to interact with each other.*

*The route alignment has been designed to minimise impacts on the community identity of Berry and smaller localities within the study area. “*

The Berry Alliance continues to protest the RMS policy of defining Berry by its main street and justifying all negative impacts by the removal of “physical barriers” there. The inability of the RMS to recognise that their preferred option imposes an even greater and irredeemable barrier in the town has caused the Berry community much frustration and unhappiness.

### **Implications of changed access at Berry, (p. M-42)**

From this point discussion by the RMS centres on mitigation of problems which it has itself caused by the adoption of the preferred northern route. At no stage has the RMS considered that avoidance, rather than management and mitigation, would best meet the needs of the community and best respect the township of Berry.

Consideration of the severance of North Street fails to address the feelings of the whole



community which enjoys this quiet rural area; the physical separation of the Kangaroo Valley side of town is not seen, apart from the possibility of a serious incident on the overpass, as severance; the peaceful pleasure of an excursion along North Street is replaced with the alien experience of traversing two busy roundabouts and an overpass with traffic speeding noisily below; the advisability of reducing access to Kangaroo Valley Road from two streets to one is unsatisfactorily addressed; the provision of pedestrian refuges at each of the many roads feeding into the roundabouts does not satisfy concerns for safety, particularly for unaccompanied children of school age; visual connection across one wide bridge is expected to compensate for the destruction of the land contours that currently link the older and the newer parts of the community.

*“This bridge would be sufficiently wide to provide for off road pedestrian/cycle access adjacent to, but separated from, the carriageway and would maintain the existing connection between the main township of Berry and developing areas to the north-west. The design retains the existing alignment and level of Kangaroo Valley Road and incorporates formal pedestrian and cyclist access to reinforce connectivity between the existing urban area and newly developing areas. “*

The appendix recognized in 5.1.2 that community severance can result from modified travel patterns or psychological barriers created by transport infrastructure, eg. highways or bridges. The Berry Alliance requests the DP&I to ask RMS why they have ignored their own studies and now claim that the provision of a bridge, built to the same height as the existing roadway, would be sufficient to retain and even reinforce connectivity to this severed area of town.

The following statement again demonstrates the failure by RMS to consider Berry as an entity rather than just a shopping strip.

*“While the design of the upgrade has been unable to overcome the removal of an access point for west Berry residents, the trade-off following the bypass is expected to be improved safety for pedestrians and cyclists and the strengthening of Berry’s identity as a destination town. “*

The Berry Alliance strongly asserts that Berry’s identity as a destination town, given the number of visitors who book for a stay in the area, will not be strengthened by the preferred route; rather it will be weakened by loss of amenity to the town overall. The Berry Alliance strongly disputes the following point made in the summary (M-47):

*“Improved amenity in Berry is expected to reinforce a sense of community identity and wellbeing which, in turn, is expected to have positive outcomes for community cohesion. “*

#### **M Part 5.2.5: Business impacts**

This section fails to address the potential positive impact on business that could be gained by a predicted traffic volume increase from 55% to 84% using the Princes Highway rather than the Sandtrack.

The EAR gives no consideration to the fact that the imposition of a 21<sup>st</sup> century highway upgrade on a town that has successfully resisted “modernization” and trades on its heritage could impact negatively on the district’s numerous accommodation providers.

*“The bypass to the north of Berry provides the closest freeway access to the town centre which would enhance access to accommodation in Berry. “*

Again the report states the importance of the town remaining visible from the highway for ongoing economic viability despite studies to the contrary, eg. Berrima. RMS does not seem to remember the community's strong statement that Berry is a destination in its own right. It does not rely on chance visit.

#### **M Part 5.2.6: Recreational impacts**

Berry Alliance recognizes that the buffer zone between North Street and the upgrade would make a valuable community resource and requests ongoing community consultation in its design.

#### **M Part 5.2.7: Location specific impacts**

This section further illustrates the focus of the RMS on Queen St, North St and Huntingdale Park. A consideration of the visual and noise impact on the whole town is lacking. Only Queen St would be more attractive for tourists, no area other than Queen St would be made more attractive for residents or visitors.

The description of the 4 m high embankment that will rob North St of its views as "a ha-ha" is laughable. A ha-ha relies on a boundary dropping away, totally preserving a view with no man-made barrier necessary at the point of separation.

#### **M Part 5.2.8: Mitigation measures – operation**

This summary merely repeats what is to be found earlier in Appendix M and elsewhere. It is difficult to accept the RMS statement that continued community consultation would improve amenity and cohesion.

*"Community consultation would continue around the amenity impact and design of noise mitigation measures. " (Amenity)*

*"Continue community consultation to provide a means of achieving outcomes that maximise benefits for the community as a whole. " (community cohesion)*

Both will suffer from the physical impact of the upgrade which, once completed, can not be redressed.

#### **M Conclusion**

The Berry Alliance views the conclusion as being consistent with the tone of the rest of the socio- economic report.

*"The impacts on the community as a whole are not expected to be significant.*

*Overall, the social and economic benefit of the proposal is expected to outweigh any negative impacts that cannot be satisfactorily mitigated. "*

The Berry Alliance does not agree. The roadmakers will move on, the Berry community and visitors will be left to enjoy the quieter shopping district at far too great a cost to the rest of town. We request that the DP&I seriously consider whether the RMS preferred northern bypass has satisfactorily and equally achieved all of the project objectives.

## **5.8. EAR Section 8: Other issues**

### **5.8.1. EAR Section 8.1: Geology and soils**

#### **Potential Acid Sulphate Soils.**

The E.A. Report considers the issue of Acid Sulphate Soils (ASS) and potential ASS (PASS) in section 8.1 Geology and Soils. The report states: *“Following further consideration of the known geological information for the project area, an additional area where there is a low risk of PASS being encountered has been identified. This corresponds with areas with alluvial flood plain soils at the Broughton Creek floodplain, and at the bypass of Berry. These areas are shown on Figure 8-3.”* (EA Report Page 475).

The E.A. Report further states that in Acid sulphate soils (Page 472) *“Any exposure of PASS to air or the lowering of the water table due to excavation would lead to the development of actual ASS.”*(EA Report Page 479).

#### **Ancillary facilities.**

The E.A. Report considers the issue of Ancillary facilities (Page 105). *“A number of potential ancillary facility site locations have been selected, as illustrated in Figure 4-20 based on the criteria listed in Table 4-10.”* (EA Report Page 105) Table 4-10 Selection criteria for ancillary facility sites.

Sites identified on Figure 8.3 Additional areas of potential acid sulphate soil risk as D,E,J and L coincide with areas identified as PASS.

#### **Flooding.**

The area of 1 in 100 flooding is shown in Figure 7.15 100 year floor extent. (Page 308). This also shows the ancillary areas. Sites D,E,J and L coincide with areas identified as 1 in 100 flood prone.

Sites identified on Figure 8.3 Additional areas of potential acid sulphate soil risk as D,E,J and L coincide with areas identified as PASS.

Mitigation is considered for the ancillary sites where 1 in 100 flooding may occur.

*“Wherever possible, sites are to be located above the 1 in 100 year flood level. If sites cannot be located above the 1 in 100 year flood level, they could be located above the 1 in 20 year flood level subject to the implementation of appropriate mitigation measures to reduce flood risk and impacts on the surrounding environment”* (EA Report Page 106)

No consideration is given to the impact of the dual constraints of flooding and potential acid sulphate soils.

The Berry Alliance requests that, in addition to the mitigation measures required to reduce flood risk, any mitigation measures regarding impact on the surrounding environment be specifically required to manage potential acid sulphate soils.

### **5.8.2. EAR Section 8.2: Air quality**

Whilst we note that air quality is not addressed in the DG's requirements there is an important issue of dust nuisance during construction which needs to be addressed. It is further noted that air quality modelling for the EAR used metrological data from the Gerroa Tip site. The meteorological data gained from this site is not appropriate for Berry as it is located on the coast and has completely different weather patterns than Berry. For instance Gerroa is not subjected to the same intensity of westerly and south westerly winds in winter and spring as Berry.

The EAR concludes that there are no significant air quality impacts on air quality apart from dust impacts from wind erosion from spoil stockpiles. We are concerned that mitigation measures for stockpiles particularly that in Woodhill Mountain Road Berry are not adequately addressed. Whilst it is recommended that dust monitoring of sensitive receptors is recommended, more detail on mitigation measures needs to be provided.

### **5.8.3. EAR Section 8.3: Hazard and risk**

No comments

### **5.8.4. EAR Section 8.4: Waste management**

No comments

### **5.8.5. EAR Section 8.5: Greenhouse gas and climate change**

We refer to the Appendix O of the Environmental Assessment – A Review of Greenhouse Gas and Climate Change.

We commend the RMS for such a detailed analysis of the greenhouse gas emissions for the project. However we are dismayed that the analysis does not extend to recommending measures to reduce the emissions from the project. We note the significant emissions being generated on Stage 1 from truck movements on the Gerringong bypass. We strongly urge the project to take the analysis further by examining in detail the most significant activities generating greenhouse gas and offering ways to reduce them where possible.

## **5.9. EAR Section 9: Environmental Risk Analysis**

The Berry Alliance is not satisfied that the Environmental Risk Analysis provided by the EA report is a sufficient response to the requirements of the Director General. Please see our comments made in Section 4 above. This section of the EAR largely presents a reiteration of statements made, already more than once, elsewhere in the report.

Nowhere is the risk that traffic flow predictions, on which much of the EAR is based, prove to be incorrect either in overall quantum or, more critically, in the proportion of heavy vehicles at night. The latter has proven to be a major problem in previous projects. Traffic flow predictions obviously have an uncertainty and this section would seem an obvious location to consider the error risk. The impact of the volume of both light and heavy traffic that would use the Nerriga Rd when completed to access the South Coast from Canberra in preference to the Hume Highway, has not been considered.

The purpose of this section of the Director General's requirements is important. If the EA report contained identification of potential uncertainties (additional risks) with an associated pro-active mitigation proposal that can be reflected in the project statement of commitments and passed on to the contractual obligations of the project builder, the Berry Alliance would be satisfied. For example, there is no mention of measures that could be taken if the Queen Street roundabout was blocked by a serious accident. Reference is made to a possible blockage of the Kangaroo Valley overpass however. The response that a critical incident plan would be written is inadequate and does not mitigate the fact that this by bypass restricts all access to one point.

At present, this section of the EAR reads as a series of grandmother statements. The history of major projects is that retrospective corrective actions, should they prove necessary, are both extremely expensive and rarely fully effective. Mistakes made at the project concept stage are outcomes the affected community will live with in perpetuity.

## 5.10. EAR Section 10: Draft Statement of Commitments

The Berry Alliance considers the draft statement of commitments to be deficient. The undertakings included in the Draft Statement of Commitments are not measureable, nor are they binding in their terminology on the obligations imposed on the future Contractor responsible for the eventual management of the impacts generated by this project.

It is not sufficient, for example, to make a commitment to require preparation of a future noise and vibration management plan as the response to the fact that numerous aspects of the project noise and vibration impact have not been quantified in this Environmental Assessment. A commitment stating that the Proponent will ensure that the requirements of the Director General are imposed on the Contractor through the implementation of a noise and vibration management plan prepared as part of the contract negotiation may provide a meaningful commitment.

The focus for a number of commitments is inappropriate. These include:

Construction traffic management (T1) proposes a management plan. Elsewhere in the EAR it is stated that traffic management, particular truck movement, has not been considered. The plan proposed by T1 will be prepared only after a contract has been negotiated and the contractor engaged.

The traffic level monitoring proposed by (T3) is focussed only on traffic flow at peak periods. A major concern held by the Berry Alliance is the impact of traffic flows, particularly noise, during night time periods. Traffic monitoring during peak periods will disclose only serious design flaws and is unlikely to disclose any serious impact outcomes on the community.

The construction noise and vibration management plan (NV1) will mean nothing to the affected community if the basis for implementation of mitigation treatments is dependent on “reasonable” cost decisions made by a contractor already engaged by the RMS.

The use of the term “generally” in NV2 largely absolves the RMS from any responsibility regarding potential adverse impacts on the community from work outside approved construction hours. This is only aggravated by the stated intention of the RMS to seek extended “normal” hours.

The inconsistent use of the terms “extended” and “out-of-hours” in NV3 renders an already weak commitment almost useless. Providing a hotline for complaints is necessary, but is not a solution to anything other than, potentially, pacifying an already impacted resident.

The commitment (NV4) to monitor increases to operational noise for up to ten years after opening is a potentially meaningless promise. Nowhere is an accurate statement given that provides unambiguous base levels for existing traffic noise, against which future changes may need to be measured. Furthermore, if residents are required to wait ten years before a finding that the environmental controls on the project have failed, this commitment really acts only as a smoke screen to delay requirement for corrective actions.

The Berry Alliance does not believe a “clear trend” can be properly agreed under commitment NV5, nor can the adoption of “feasible and reasonable” measures be considered any form of warranty to the community. Should a failure be found to have

occurred, the application of “feasible and reasonable” treatments will have already been applied, meaning this undertaking is nothing more than window-dressing.

Commitment NV6 does not appear to be a logical statement when the EAR has, elsewhere, already made statements that various properties are ineligible for treatment under this very same circumstance. This statement should be removed, or alternatively the mitigation treatments discussed in the EAR re-worked so as to include the properties identified in NV6.

Numerous issues have been identified in our discussion of Biodiversity wherein new assessments are considered necessary. While the undertakings in F1-12 may be appropriate, the Berry Alliance considers it mandatory to update and improve numerous items prior to considering these commitments to be appropriate.

Adverse social and town planning impacts discussed at some length in this Berry Alliance report are total omissions from this schedule of commitments.

## **5.11. EAR Section 11: Appendices**

References are made elsewhere in this report to the appendices forming part of the EA report.

## **6. OTHER REFERENCE DOCUMENTS WARRANTING REVIEW BY PLANNING NSW**

The Berry Alliance believes there are important findings reported in a small number of recent documents that are relevant to this Project. In particular, these provide high level guidance on aspects of rural amenity and sleep arousal that we believe should be considered in the review of the Project.

The objective of the Berry Alliance in providing these references is not in objection to the criteria proposed by the Director General through the authorities responsible for the documents then relied upon by the Proponent. We are concerned that:

- the assessment of risk submitted by the Proponent within the application is incomplete, and
- that future decisions, made by others, regarding what is “reasonable” mitigation treatment will be made without adequate regard for the consequences.

### **6.1. Transport for Quality of Life: “Traffic Noise in Rural Areas”, 2008.**

The authors of this document are a non-profit UK research organisation. The work has originated as part of the ongoing review of traffic planning in the UK and the findings, both in measurement methods and management policies, are more easily associated with the UK and European regulatory structures than they are to the Australian context. Nonetheless, important summary conclusions and recommendations, clearly relevant to the Australian context, are made. For completeness, the full seven point recommendations is provided, though the Berry Alliance recognises some fall outside the scope of considerations for a project Application.

The recommendations are:

#### **1. Recognise the impacts of road noise on rural areas.**

*The solution lies in recognising the worth to society of lack of noise and how intrusion of noise fundamentally changes the experience of countryside amongst those living or seeking recreation there. Present noise policy is merely overseeing cumulative worsening of noise intrusion throughout the countryside. Noise policy should be more ambitious: it should aim to ‘clean up’ the countryside polluted by road noise, just as its rivers and estuaries have been successfully cleaned in recent decades*

#### **2. Set targets for traffic noise reduction throughout the countryside.**

*Recognition is required that noise from roads in the countryside is already at unacceptable levels. These noise levels reduce the value of the countryside as a shared resource for the whole of society. Actions are needed to reverse the present trajectory towards ever fewer tranquil areas. Decision-makers should set in place policies to reduce rural traffic noise.*

#### **3. Reduce traffic speeds in country areas.**

*The quickest way to achieve a large reduction in road noise in the countryside is to cut speed limits.*



#### **4. Restrictions on noisy vehicles.**

*The rapid growth of heavy goods vehicles and other commercial vehicles on rural roads demands consideration of where these vehicles are or are not appropriate. Enforceable controls are required for particularly noisy motorbikes and cars.*

#### **5. Recognise the deficiencies of road appraisal for rural areas.**

*Approval guidance for road schemes should make it clear that noise disturbance generally extends beyond 300m in country areas and should be explicitly included in the assessment process.*

#### **6. Re-assess the approach to noise mitigation measures.**

*The 'Noise Severity Index' should be amended so that it has a fairer application to small communities and extended to include disturbance that occurs at lower noise levels. The overall budget for physical noise mitigation measures should be increased. However, mitigation measures considered for trunk roads and motorways should not, as at present, be restricted to constructional solutions but should include minimal cost measures such as reducing speed limits to 50mph from the current 70mph on dual carriageway roads close to settlements. Local authorities should rebalance their assessment of noise problems on roads under their control to lower the threshold for application of reduced speed limits and weight restrictions where noise is an issue.*

#### **7. Invest in 'smart' tourism.**

*Visiting and taking recreation in scenic country areas is liable to become a self-destructive activity if it is reliant on private vehicles. National Parks and other areas that attract high numbers of visitors and their cars require public transport access options (scheduled and demand-responsive) of sufficient quality to permit restrictions on private car movements with the aim of concentrating a large proportion of car destinations at places that can act as public transport hubs near the boundary of the area in question.*

### **6.2. WHO, "Burden of disease from environmental noise", 2011.**

The target audience for this publication is primarily policy-makers and their technical advisers.

A number of important health aspects relating to the effects of noise are considered, many of which are obviously outside any issues relevant to the Berry Bypass Project. Nonetheless, a review by relevant planning authorities is encouraged.

The findings most relevant to the Berry Bypass are those summarised in Table 4.1 of the WHO report, page 58. This is presented below and supports the limit levels sought by the Berry Alliance for control of sleep arousal.

**Table 4.1. Ranges for the relationship between nocturnal noise exposure and health effects in the population**

<b>L<sub>night,outside</sub></b>	<b>Health effects observed in the population</b>
< 30 dB(A)	Although individual sensitivities and circumstances differ, it appears that up to this level no substantial biological effects are observed.
30 – 40 dB(A)	A number of effects are observed to increase: body movements, awakenings, self-reported sleep disturbance and arousals. The intensity of the effect depends on the nature of the source and the number of events. Vulnerable groups (for example, children and chronically ill and elderly people) are more susceptible. However, even in the worst cases, the effects seem modest.
40 – 55 dB(A)	Adverse health effects are observed among the exposed population. Many people have to adapt their lives to cope with the noise at night. Vulnerable groups are more severely affected.
> 55 dB(A)	The situation is considered increasingly dangerous for public health. Adverse health effects occur frequently, and a sizable proportion of the population is highly annoyed and sleep-disturbed. There is evidence that the risk of cardiovascular disease increases.

*Source: Night noise guidelines for Europe (38).*

*Note.* The guidelines assume an average attenuation of 21 dB(A) between inside and outside noise levels.

**Figure 1: Extract Table 4.1; WHO "Burden of disease from environmental noise", 2011**

Note that L<sub>night, outside</sub> may be compared with the LA<sub>eq</sub>, 9 hour values adopted by the NSW Road Noise Policy.

## **7. PROPOSED COMMITMENT REQUIREMENTS**

The Berry Alliance acknowledges that, in preparing a draft statement of commitments, both the RMS and DP&I are endeavouring to simplify the project approval process. Had the project design and impacts been developed with widespread community satisfaction this procedure would have been satisfactory. Considering the widespread community concern over the current proposal we believe a more detailed process is required to develop satisfactory approval commitments.

The Berry Alliance believes, strongly, that establishing the commitment requirements for this project will require substantial reconsideration. Critical design issues remain unresolved, despite substantial community input. Critical aspects of the project social and environmental impact remain unsatisfactory.

The Berry Alliance believes that satisfactory drafting of project approval commitments requires further community input, either through further participation by a community review group such as that used for this project in late 2011, with the assistance of local experts, previous participants in community planning, and with representatives of Berry community groups – two churches located close to the construction area, Berry Chamber of Commerce, Berry Landcare and the Berry Alliance. This community has provided substantial commitment of both time and cost in an effort to achieve a satisfactory project outcome and does not wish to see these past endeavours wasted.

## **8. CONTRIBUTORS TO THIS DOCUMENT**

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